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Transport and Steel in the Commons

LITTLE time has been lost by the new Government in making a start on matters affecting transport. In fulfilment of its election promise to give road hauliers whose business had been nationalised an opportunity of re-purchasing them, the Government has gone as far as it can without legislation by offering six months' postponement to hauliers under notice of transfer to the Road Haulage Executive; legislation is promised as soon as possible to enable already nationalised haulage businesses to be bought back, and also to alter the 25-mile limit on private road hauliers. First, however, there is to be consultation between all those affected, including the British Transport Commission, the Road Haulage Executive, and private interests. In this respect due weight should be given to the views of the Railway Executive. The Home Secretary, Sir David Maxwell Fyfe, has spoken of Government determination not to take any risk with the general transport interests of this country. This points not only to the need for caution in the reorganisation of nationalised transport, to which we referred last week, but also perhaps—in the face of Opposition determination to reverse, if it gets the chance, any Conservative measure of denationalisation—to reluctance to submit the transport services to a political tug-of-war. The Government has stated clearly its intention to interrupt the present process of nationalisation of road haulage, but does not say more. As to denationalisation of steel, there has been promptitude on the part of the Minister of Supply, Mr. Duncan Sandys, who has directed the Steel Corporation not to make any change in the financial structure of the publicly-owned companies without consulting him, and not to dispose of any undertaking. This again is as far as the Government can go without legislation. The latter also is complicated by the Opposition threats of reversing the process. Meanwhile, pending legislation regarding this most complex issue, all concerned are to be consulted. It appears to be in the best interest of users of steel, including the railways and the railway material export industry of this country, that the Labour steel allocation scheme, or something akin to it, is to be applied.

Railway Wages

THE award made last week by the Railway Staff National Tribunal, to which the matter was referred as a dispute, is a compromise between the three railway unions' claim in July and the Railway Executive offer a month later. The unions demanded a flat-rate increase of 10 per cent. and enhanced payment for weekend work, which, if granted, would have cost the B.T.C. £17-18 million a year. The Railway Executive offered varying pay increases, mainly benefiting the grades most susceptible to the attractions of outside industry, and also—for the first time in British railway history—additional flat-rate pay for duty beginning on Saturday: if accepted, the offer would have cost £9½ million a year. The Tribunal award, of which details appear on other pages, is of a flat 8 per cent. increase in rates and of the same weekend pay as offered by the Executive; if implemented, its annual cost will be some £14½ million. There is no mention of increased working time or abandonment of restrictive practices as a condition of the increases. The award has been accepted by the unions, and as we went to press the outcome was awaited of a meeting on Wednesday between the Railway Executive and the unions. Whatever the result, the additional cost will be a serious item in the present financial state of nationalised transport.

State-Owned Bus Interests

SINCE the election of the Conservative Government there has been a good deal of conjecture as to the likelihood of changes in the present organisation of the State transport undertakings. So far, this has centred largely on the position of the Railway and Road Haulage Executives. The position of the State-owned and also the still-independent road passenger undertakings may also be affected. So far as the latter are concerned it seems in the highest degree unlikely that there will be any further attempt to impose area schemes. A considerable amount of road passenger transport, therefore, will be left outside the complete control of the British Transport Commission. The position of the road passenger transport undertakings which have already passed to the Commission, either by reason of the shareholdings owned by the former railway companies or in other ways, is not so clear. Much depends on what the Government decides, as a matter of policy, should be the future function of the British Transport Commission, and, indeed, of nationalised industries generally. Merely to preserve the present position probably would mean that, in the event of another Socialist Government at some future time, the process of nationalisation would continue from where it left off.

Unscrambling Road Transport

IF the Government decides to proceed with the passing back to private enterprise of road haulage undertakings, as it proposes to do, the question of the future of the road passenger industry inevitably must arise. The Road Pas-

senger Executive is a small body which has shown relatively little activity since its inception. In the investigation of economies in the operation of the B.T.C. which may be made, it is probable that this body will attract attention. A form of pooling of the B.T.C. road passenger interests with those of one or more of the larger independent groups might prove a solution to the problem of renewing public participation in the bus companies. The operation and supervision of the services would be subject to regulation and control by the licensing authorities in the public interest. A scheme of this sort would be similar to that which operated successfully for many years in the case of the road passenger undertakings in which the railway companies had substantial shareholdings.

G.N.R.(I.) Stockholders and the New Proposal

IT was stated in the Dail recently that although the Dublin Government was prepared to justify compulsory acquisition of the G.N.R.(I.) for £3,900,000, an offer from the stockholders of voluntary sale at a "somewhat higher figure"—not then disclosed—would be considered. This figure was given as £4,500,000 after a meeting between the G.N.R.(I.) Board and Dublin and Belfast Ministers on October 1. The G.N.R.(I.) Stockholders' Protection Association has issued a circular to the stockholders on the subject of the £4,500,000 proposal, asking them to signify their acceptance or rejection of minimum divisions of each class of stock which, after discussion, it has proposed for the purpose of obtaining their views. It will be seen from the following tabie that they differ from the expected distribution, on the basis of Stock Exchange values given in our October 12 issue, when it was assumed that the terms would be applied *pro rata*:—

Stock	Basis	
	£4·5 million	£3·9 million
4 per cent. debenture	89½	81⅝
4 per cent. guaranteed	66	61
4 per cent. preference	35	31½
Ordinary	28½	20½

The Association's action is not to be taken as an acceptance of the figure of £4,500,000, which, it believes, can come only from the stockholders as a whole, and is without prejudice to its repeated requests for arbitration. The Association asks the directors to have a ballot taken on these new figures; when the views of the stockholders are returned, not later than November 27, an extraordinary meeting of them might be called.

Overseas Railway Traffics

WORKING expenses of the Canadian Pacific Railway for September were £747,000 higher than during the same month of 1950, and, as this increase was accompanied by a £247,000 deterioration in gross earnings, net revenue fell by £994,000. Gross earnings for the month were £11,990,000 and on the aggregate amounted to £105,001,000 for the current 39 weeks. Net earnings since January 1 are £1,862,000 higher and amount to £5,009,000, of which £648,000 was contributed by the month of September. During the same four week period operating revenues of the International Railways of Central America fell by $76,767 to $923,671 and there was a resultant deficit in net income amounting to $118,853. Operating expenses for the nine months ended September 30 include $187,500 of an estimated total of $250,000 for past accrued overtime granted to certain employees by a recent decision of the Labour Courts of Guatemala in a litigation that has been pending for some 18 months. Operating revenues for the current 39 weeks have declined by $281,585 and, together with the increase in expenses, this has brought about a $794,225 decline to $272,339 in International of Central America net income.

Electrification in Southern Brazil

TENDERS have been invited for electrifying 88½ miles of the metre-gauge Rio Grande do Sul Railway in Brazil. The section concerned is between Santa Maria and Cruz Alta, part of the main line from the North to the ports of Porto Alegre and Rio Grande. Goods traffic between Santa Maria and Cruz Alta may be as heavy as 3,000 *tonnes* northbound and 4,000 *tonnes* southbound in a day; in addition there are two daily passenger trains loading to 400 *tonnes* in both directions. It is hoped to finance the conversion from the savings realised by electric working, and as shown by the details in our Contracts & Tenders columns this week, the scheme involves distribution of power at high voltage from an existing generating station, substations, and track supply equipment as well as locomotives. The form of electrification is 3,000 V. d.c., but alternatives may be put forward. So far 3,000 V. d.c. has been adopted for 350 route-miles of railway in Brazil; the most recent project is that of the former San Paulo Railway between Moocha and Jundiahy (40 miles), for which substation and overhead equipment and motive power were supplied by British firms.

Retired Railway Officers' Society

ALMOST exactly 50 years after the Retired Railway Officers' Society was founded on November 12, 1901, its jubilee autumn luncheon was held in London last Tuesday; some account of this is given elsewhere in this issue. It was particularly appropriate that the guests at this jubilee gathering should have included not only former Chairmen of three of the four main-line railway companies, but also a President of the Board of Trade, besides the Chairman and Members of the Railway Executive and four of the six Chief Regional Officers. The Board of Trade, as Mr. Peter Thorneycroft, the President, pointed out, was the Government Department concerned with railway matters until the formation of the Ministry of Transport in 1919; and Mr. Thorneycroft's presence was welcome on personal grounds, for as a Conservative backbencher during the late Labour Government he displayed unflagging interest and vigilance in railway questions in the House of Commons, as has been apparent in the Parliamentary columns of this journal. The Retired Railway Officers' Society is to be congratulated on achieving half-a-century of vigorous and useful life, with prospects of equal usefulness in uniting the past and, on due occasion, the existing holders of responsible positions in the railway industry for many years to come.

Education for Management

AMERICAN experience has shown that productivity and training for administrative duties are closely related, and recent years have seen a great expansion in the U.S.A. of facilities for preparing suitable men to take their place in management at all levels. Almost all the productivity teams from this country have emphasised the high standard of American management and are agreed that manpower productivity there is higher than in Britain. Another team, whose report* is published this week, recommends that British industry as a whole should study means of promoting educational experiments, and that education authorities should consider how they can best encourage and develop administrative studies. Individual firms also might review their training programmes in the light of U.S.A. experience. This latest report draws no comparisons between the two countries in methods of teaching administrative work, beyond stating a few facts which are common knowledge, but as no comprehensive study of what is being done in this country has been compiled as yet, the preparation of such a study should in the opinion of the team be treated as a matter of urgency.

* "Education for Management." Published by the Anglo-American Council on Productivity, 21, Tothill Street, London, S.W.1. Price 4s. 6d.

Ruling Gradients

A WIDELY accepted view is that the ruling gradient is the maximum, and often it is, but actually the ruling grade is just what the name implies—the gradient that governs the train weight. It may be more or less than the normal, even when allowance is made for curvature for the equivalent grade. A very short section of steeper grade in a long general rise may prove the limit if trains have to be started on it, either from a station or from signal stops, whereas under other conditions it might be rushed with the aid of momentum from a preceding down grade or a much easier up grade, and so not be a ruling factor in the capacity of the line. On the other hand, the general rate of rise, rather than the maximum, may be the ruling factor. We had experience recently on a line of three miles at 1 in 60 having ¼ mile at 1 in 53 within it, both sections at about equal curvature. But the 1 in 53, even with a 500-ton freight train, was not the limiting factor: this was on the 1 in 60 in two sections—one in a cutting where dead leaves can be a nuisance and the other on a section of open embankment subject to cross-winds.

Accident at Langenwang in Austria

OUR contemporary *Eisenbahn* gives some particulars of a serious accident which, as recorded in our issue of October 5, occurred on September 26 at Langenwang, Austrian Federal Railways, when the Vienna-Rome express ran into a shunting goods train, the first really bad accident experienced on those lines since that at St. Valentin, on October 25, 1939. The station supervisor had cleared his home and outer distant signals for the express, contrary to rule, as the prescribed overlap beyond the starting signal was occupied by the shunting movement, but the inner distant and the starting signal, about 950 yd. in advance, were necessarily against the train, braking distance for which was about 765 yd. at this spot. A hand stop signal was being shown at about 60 yd. in rear of the starting signal. The express driver failed to heed the warning given by the inner distant, and could not pull up in time, another instance of the breaking of a rule coinciding with the very lapse on the part of another against which it is intended to afford a safeguard. Signalling apparatus on the Austrian lines is of first class construction.

Railway Staff Problems

ALTHOUGH the four-weekly statistics of British Railways staff published by the British Transport Commission seem to show that in recruitment at least the railways are holding their own in the struggle to maintain adequate staff, the situation is more serious than appears from statistics; nor does any considerable amelioration appear likely for a long time to come. The wage increase for clerical and conciliation grades awarded last week by the Railway Staff National Tribunal, discussed elsewhere in this issue, by increasing the attractiveness of some of the lowest-paid grades, when other advantages inherent in railway employment such as security of tenure and travel concessions are taken into consideration, may encourage recruiting and check the drift to other employment. It is true that the considerable responsibility demanded for instance from all, including the most junior, operating grades is compensated by an unusual degree of interest attaching to operating duties of all kinds; and the almost complete security of railway employment and the monetary value in the course of a year, say, of free passes and privilege tickets should be a powerful incentive to married men. Unfortunately, these factors tend to be overlooked in the light of the attractions of more and easier ready money, cleaner work, and more regular hours.

In the present financial state of nationalised transport, it is hard to see what can be done to remedy the manpower situation in conciliation and junior clerical staff. We have on several occasions advocated, as a palliative, the exemption of certain grades of operating staff from conscription on the ground of sheer necessity, despite the issue of discrimination between different occupations, and even between different employments within the railway service, which that would raise. Much can be done and is being done by mechanisation which reduces manpower requirements. Some progress has been made by British Railways in the mechanisation for instance of track maintenance, the subject of a series of articles appearing currently in this journal; and the mechanisation of Toton Up Yard has effected manpower economies of 25 per cent. Mechanisation, however, has created its own problems, such as the efficient maintenance and use of new appliances by staff hitherto untrained, and the higher degree of mechanical skill demanded from that staff.

The efforts made by the Railway Executive to effect economy in manpower by increasing the number of lodging turns worked and to abandon practices wasteful in manpower have been largely stultified by the intransigence of some trades union representatives at the Special Joint Committee established to effect staff economies. Such an attitude is the more regrettable in view of the willingness of many of the men involved, as in the case of lodging turns, to co-operate.

With so much attention directed to the numerically important conciliation and junior clerical grades there is a tendency to ignore the serious question of senior and junior officers. Senior officers' salaries, that is, salaries for senior officers' posts which have not been re-designated, in many cases are only some 50 to 70 per cent.—the latter is probably a high figure—above pre-war. With the increased cost of living and much heavier taxation the real value of such salaries is much less. In addition, many posts have been re-designated as a result of nationalisation and centralisation on the Railway Executive of responsibilities which formerly lay on officers of the four main-line companies. Officers succeeding to those posts therefore have rather less responsibility than before the war, and receive considerably less pay. The number of "plums" has been lessened by reorganisation resulting from nationalisation, which is a deterrent to the ambitious who consider entering the railway service. When promotion is offered, it may often have to be refused where it involves change of residence, because of housing difficulties. Besides this, the senior officer today has lost status, because of increased centralisation, and his initiative is restricted. It may be that the pendulum now will begin to swing the other way, at least as regards decentralisation, which would increase the scope and initiative, and therefore the status, of officers. If this is one of the steps alluded to by the Conservative Party election manifesto with reference to the reorganisation of nationalised transport, it is a welcome move which would hearten many railway officers.

Junior officers, who especially in operating are the backbone of the railways, are necessarily affected by some of the above considerations, except that their posts have not been re-designated or reduced in number or status to the same extent; the salaries attaching to some posts, however, have been reduced without any diminution of duties. Both they and senior clerical and supervisory staff are seriously affected, not only by post-war rises in taxation and living costs out of proportion to advances in salaries. Despite heavy responsibilities in all departments, they have received pay increases disproportionate to those granted to junior grades, so that the differential in respect of increased responsibility has diminished. Another factor undermining morale and causing widespread resentment is the practice, which we understand to be only too common, of advertising a vacancy at a given salary, and then of paying a salary less than that advertised to the man selected from a lower grade.

The various disadvantages, ranging from serious financial handicaps to pinpricks, from which senior railway staff are suffering, are having bad effects. Apart from questions of morale of serving staff—and the high level of efficiency and service among officers and senior clerks and supervisors in present conditions does them the greatest credit—there is that of recruitment and wastage. As to entrants, it is probably the reduction in scope and status of senior appointments which is deterring the more ambitious recruit, which often may mean the right sort of recruit. The disappearance of India, Argentina, and some

other countries as outlets for younger officers may deter some prospective entrants from seeking their training on British Railways. On the other hand, although the appointments overseas have been much reduced in number, overseas railways have not ceased to draw away from British railways younger men who might have stayed had conditions and prospects been more attractive. Besides overseas railways, industry in this country has attracted and is attracting away from railway employment not only promising juniors, but in some cases more senior men occupying positions of responsibility, who can ill be spared.

The remedy with senior appointments is less far to seek than with the rank and file. Where the pay of tens of thousands is not the issue, it is false economy to withhold adequate salaries from the relatively few—a fact recognised by the four main-line railway companies and by much smaller units before Grouping in 1923. Apart from centralisation—inevitable though it may be with the present nationalised railway system—the question of granting officers and other responsible officials adequate status, and of giving them scope for initiative and freedom from interference, is one which can be to a great extent solved before the new Government starts on any plan of transport reorganisation.

Marshalling Yard Design

IF evidence were needed to emphasise the importance attached to sorting and marshalling yards by railway administrations throughout the world, it surely is to be found in the fact that problems associated with the shunting of wagons were the subject of two items on the agenda at the fifteenth session of the International Railway Congress Association held in Rome last year. It will be recalled that one question dealt with " New technical methods adopted for the design and construction of large marshalling yards " and another with " Organising methods to be used in large marshalling yards and terminals to reduce to the minimum the cost per wagon shunted."

From the reports submitted to the Congress, the conclusions reached by the special reporters and the summaries finally adopted, it is clear that two main features are paramount in the minds of the administrations concerned, namely, the ever growing desire to speed up the transit of rail traffic and the insistent need to counter the gradual growth in yard operating costs. Related to the latter is the question of increasing operating capacity, as present-day economic conditions demand that existing facilities shall be used to the full, and also that the through-put shall be increased where possible by modernising layouts, equipment and technique.

In the joint reports submitted to the Congress on new technical methods of design and construction of large marshalling yards by Mr. J. I. Campbell, Civil Engineer, Eastern Region, and Mr. J. W. Watkins, Chief Regional Officer, London Midland Region (then Operating Superintendent), some reference was made to the then almost complete Up marshalling yard at Toton, and elsewhere in this issue we publish the first of a series of articles on this important London Midland Region traffic yard. The description is compiled from the Operating, rather than the Engineering, angle, as a detailed account of many of the technical aspects involved in a scheme of the size undertaken would be very lengthy and could, in any case, be more extensively treated in the more appropriate engineering fields, Civil, Electrical, Mechanical, Signal & Telecommunications.

In our issue of August 18, 1939, we published a description of the first marshalling yard " mechanisation " by the L.M.S.R. This was at Toton Down yard, but the much greater project undertaken since the war, not only of " mechanising," but completely remodelling, the Up yard at Toton, was a venture calling for boldness in conception and in undertaking. It is well known to railway officers that unless the combined benefit of experience and advanced study can be translated into action, a traffic yard and all its appurtenances will continue, under the normal process of maintenance, to be replaced like for like, and retain for ever its original shape and form, regardless of whether it is an efficient machine, or not. Far too many yards exist today which when originally designed, may be a century ago, might well have claimed to be then the last word in modernity, and, further, how many, by spasmodic additions over the years to meet some special set of circumstances, bear closer resemblances to legs of mutton than to satisfactory wagon sorting and marshalling facilities.

In passing these comments it is only too fully recognised that finance is the governing factor, but the problem of how to deal with these unfortunate legacies is one which surely will have to engage the attention of managements in the future. It would be unjust to create the impression that in the several engineering fields some measure of modernisation has been neglected. This is far from the truth, as witnessed by the increasing popularity of the diesel as a shunting unit. It is in the fundamental design of yard layouts though that the problem remains to be tackled, excepting those few yards in this country, such as Whitemoor, Hull, and Toton, where in the last 20 years drastic action has been taken.

The Up yard at Toton continues the fundamental principle of harnessing the forces of gravity to best advantage, but by virtue of the quantum of traffic with which it must deal, has of necessity to incorporate the hump, and adopt the modern retarding equipment in the form of rail-brakes. Developments in France and in the U.S.A., and, to a lesser degree in quite a number of other countries, confirm the efficacy of remotely controlled retarding equipment and what is becoming to be more popularly known as " push button " control for route setting.

Possibly the most exceptional feature at the new Toton Up yard is the ingenious adaptation of signalling indications to facilitate all movements on the arrival lines, which permits the driver of any locomotive called on to perform humping operations, whether one of the regular yard engines, or not, to have at all times absolute clarity as to what is required of him.

Nigerian Railway Operating Department

THE Nigerian Railway has carried out a reorganisation affecting its Mechanical Engineering and Traffic & Commercial Departments. An Operating & Commercial Department has been formed under the direction of the Chief Superintendent (Operating & Commercial), who combines the running sections of the Mechanical Engineering Department with the Traffic & Commercial side of the former Traffic Manager's Department. Biographical details of the new Chief Superintendent, Operating & Commercial, who has three assistants, are given in our personal columns this week.

The organisation is not altogether new to Nigeria. As a result of Brigadier-General F. D. Hammond's report on the railway, issued in 1924, the divisional system was adopted in 1925; three divisions in charge of divisional superintendents responsible for commercial, operating, motive power, carriage and wagon, and miscellaneous machinery, plant and equipment, were set up. This form of organisation was abolished in the early 1930s and running divided between the Mechanical and Traffic departments. For a time the Mechanical Department running staff, such as drivers and shed staff, has been seconded to the new department, so that during an experimental period it is hoped to reach satisfactory conclusions as to the extent to which Mechanical Department staff outside the workshops should be detailed. Although the Chief Mechanical Engineer will confine his attention largely to workshops and general locomotive policy, he will be required to carry out line inspections of running sheds and keep in touch with locomotive performance, and so on. He will therefore maintain close contact with the Chief Superintendent and his Motive Power assistant.

In 1949, Mr. H. F. Pallant, Assistant Divisional Operating Superintendent, North Eastern Region, British Railways, was asked to examine operating problems on the Nigerian Railway, and advise whether there were, in his

view, further measures which could be taken to accelerate the movement by rail of groundnuts, coal, and other commodities. The main recommendation of Mr. Pallant's report was that an Operating Department should be formed to have direct control of the running sections of the Traffic and Mechanical Departments: in addition, he recommended the strengthening of the Staff Department and its separation from the Management, to work directly under a Chief Staff Officer. A recommendation to form a Commercial Department was not followed, as local conditions indicated that the commercial work, at least for the time being, should remain part of the Traffic & Operating Department. For this reason a third assistant for commercial work has been appointed. It is uncertain so far whether other Mechanical Department staff, such as carriage and wagon examiners, water pumping and lighting staff, and sub-workshop staff at Zaria and Enugu (600 and 900 miles from Lagos, respectively) will be transferred to the new department.

Accidents on British Railways in 1950

LT.-COLONEL G. R. S. WILSON, Chief Inspecting Officer of Railways, in his annual report for 1950, while mentioning the success attained in the face of many difficulties in maintaining a high level of general safety, dwells also on the disappointment the year occasioned to those concerned with operation and maintenance. Prevailing conditions have prevented several much desired improvements from being carried out. Nevertheless, the chance of fatality from all movement on rail was again 0·7 person killed per million train-miles, the number of fatalities arising being slightly greater than in the previous year, but below the average for the five years 1946-1950. In 1949 only 12 persons in all, among them not one passenger, were killed in train accidents, properly so called, a most remarkable result, but in 1950 there were 40, which included eleven passengers killed in two collisions and a serious fire.

The number of train accidents declined from 1,176 in 1949 to 1,156 and compared favourably with the 1946-1950 average of 1,250. The improvement would have been greater but for the increase in accidents at level crossings, although casualties there did not rise in proportion. The great majority of cases were of minor importance, and only 18 formal inquiries were called for, as in 1949. Safety of operation is becoming greater, but it must be borne in mind that passenger traffic has fallen steadily since the war. In 1950 there were 21 million fewer passenger-journeys than in 1949, but freight traffic continued to expand, and the total passenger and freight mileage rose by 0·72 per cent. The ultimate criterion, Colonel Wilson points out, is found in train accident casualties considered over the years. In this respect it is reassuring to note that "the records of 1949 and 1950 do not compare unfavourably with the prewar figures."

A welcome feature is that failure of the human element is less in evidence than in recent years. The formal inquiries brought out only five instances of really serious disregard of rules or of grave carelessness. Collisions and derailments for which signalmen were responsible were 34—small compared with the amount of traffic handled safely daily. A consideration of great importance is the maintenance of traditional pride of profession amidst the growing difficulty of recruiting suitable men for this service. Unfortunately, the financial position has prevented greater extension of track circuiting and block controls, but during the last two years extensive power and automatic signalling installations have been brought into service. The wider use of automatic train control has been decided on and it is encouraging to read that experiments with improved apparatus are still being pursued.

A serious aspect of the report is in the position it reveals regarding shortage of permanent way staff and the loss of men from other departments, such as locomotive running or signal and telecommunications. Relaying and length maintenance gangs were some 7,000 vacancies, or 13 per cent., short of total establishment at the close of the year, and many length gangs were at less than half-strength. Despite the use of mechanical equipment and recourse to contract maintenance it is "becoming increasingly difficult to keep the track everywhere in fit condition for fast running, let alone restore it to the very high prewar standards of line, level, and stability, although there are long stretches of main line where they are unimpaired." The result has been the imposition of a great number of speed restrictions which hamper punctual working. This, together with the shortage of materials, has led to curtailments of renewals on the secondary lines, although a satisfactory main-line renewal programme was executed.

Accidents at level crossings again served to emphasise the gravity of the situation brought about by the increasing size and weight of road motor vehicles. This is especially so at occupation crossings, and the result of the report on them laid before the Minister of Transport by the British Transport Commission will be awaited with considerable interest. Although Colonel Wilson has been obliged to stress the seriousness of some of the conditions under which the railways are at present suffering, and in the case of accidents to servants again pleads for greater attention to the observance of elementary safety rules and for improved staff education, his report contains much that is encouraging. Given some relief from what, we hope, are but passing embarrassments, there is little doubt that we should soon see a renewed trend of improvement in several directions.

International Union of Railways

THE recent meetings of the Board of Management and of the General Assembly of the International Union of Railways, commonly known as the U.I.C., to which we refer in another page, draw attention to the steadily growing influence of this important body. Revived as soon as practicable after the war, as an essential unit in the reconstruction of Europe and its railway transport system, it can now claim to speak with considerable authority on behalf of the European railway industry and the lines in the Near East and North Africa linked so closely with the Continental network. Its success in the main can be ascribed to the fact that it is entirely a professional working body of committees and sub-committees reporting to a board on which the railways of the various nations are represented by their respective General Managers.

We consider that the railway industry in Europe has brought the degree of international co-operation to a level unexcelled, and perhaps not equalled, by any other industry. Governments which have long advocated international co-operation now have at their call a body which can legitimately claim to speak for the railway industry as a whole, and it is to be hoped that they will turn automatically to the Union for advice and counsel when international transport problems are being considered.

Much has been done within the last year to eliminate any possible duplication of effort by the various international railway bodies through bringing them all within the orbit of the Union whose postwar work has done so much to improve international railway working and the services rendered to the traveller and to commerce. The prewar British railways, since the inception of the U.I.C., played an important part in its development, due largely to the interest which the late Sir Herbert Walker took in it, and the future he saw for it.

Today, holding the position of senior Vice-President, British Railways are prominently identified with the working of the U.I.C., and two of its Committees, Passenger Traffic and Documentation, are under British Chairmen, namely, Mr. R. H. Hacker and Mr. C. E. R. Sherrington. There are some problems of course which are purely Continental, in the solution of which British Railways may not be able to participate, but as one of the largest members of the U.I.C. it is right that our railway system, with its growing international freight and passenger traffic, particularly by the ferries, should continue to lend the weight of its support and its prestige.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Railway Freight Rolling Stock

November 12

SIR,—It is correct, as suggested in Mr. Murphy's letter in your November 9 issue, that if all the freight rolling stock were fitted with continuous brakes, there would be a saving in train crews by a reduction in unproductive time. The accelerated freight train timings which would be possible would necessitate, of course, a complete overhaul of the enginemen's and goods guards' rosters; in some cases, additional out and home working would be practicable, possibly over extended distances, and in others the introduction of additional lodging turns would be the most satisfactory means of reducing unproductive time.

The main effect on unproductive time, however, would be derived from the higher standard of punctuality which could be expected with the freight trains. The reduction in the difference in speed of the fastest and slowest moving trains will increase line capacity and reduce the reactionary delay which at present is caused by the failure of any freight train to keep to its booked path. As a result, the timekeeping of the freight trains should be materially improved. Under existing conditions large numbers of train crews are employed for the provision of unbooked relief to the train crews of freight trains. These men, known as Control Relief Sets, work a certain number of special trains which are not pre-arranged, and the enginemen perform certain shed duties, but from the nature of their duties both they and the Control Relief goods guards incur a high proportion of unproductive time.

With the improved timekeeping to be expected if all freight trains ran with continuous brakes, the need for the provision of unbooked relief would largely disappear. In fact, in this respect freight trains would not vary appreciably from passenger trains, and a considerable reduction could be made in the number of Control Relief Sets employed, with a consequent reduction in unproductive time.

Yours faithfully,

S. E. PARKHOUSE

The Cottage, Rosslyn Road, Watford

Transport Integration

November 12

SIR,—Mr. Frederick Smith, in your November 9 issue, makes a number of debating points and touches on one subject of importance. I infer that he is not troubled by modesty to an extent greater than will allow him to pose as an authority on both his subject and mine.

To dismiss a statement as nonsense is not to disprove it. For our present purpose I would define "statistics" as being a collection of "facts" and "costs" as coming under three headings: (*a*) evaluated statistics; (*b*) basic material for the preparation of; and (*c*) estimates of the cost of some projected work.

You can determine the mileage run by all the four-ton vehicles in your fleet for a given period, the number of gal. of petrol used in running this mileage, and the number of days the vehicles worked and did not work. These are statistics, and within the limits of correct recording and other points so fine as to be of no significance here, they are accurate. From this information you may calculate a "miles per gal." figure which may be defined as a "derived" statistic. Derived statistics are accurate only in the limited sense that they are averages.

When you come to evaluate statistics quite a number of assumptions have to be made. On the score of depreciation alone you must assume a "life" for the vehicles in the fleet and an average attainment of that life. Overhead charges do not vary in direct relation to alterations in the composition or size of the fleet and a degree of fixity here must be assumed. In point of fact, the area of assumption at this stage is quite large and it is here that "accuracy" goes by the board.

In producing the basic material for the preparation of estimates of the cost of projected operations this area of assumption can be taken care of to a limited extent. For example, you can produce graduated costs to reflect the effect of high or low daily mileage and high or low average usage. But when you come to apply these basic costs to projected operations the "area of assumption" again comes to the fore. In short, costing, far from being an accounting science, is a commercial art, proficiency in which, in my view, can be achieved only the hard way.

I have long held the view that the assumptions necessary to produce costs of railway operations differ in degree only and in principle not at all from those admitted in the preparation of road transport costs with effective results.

Perhaps Mr. Smith and I could agree on a definition of such costs as estimates having a high degree of accuracy.

Yours faithfully,

A. RALPH WILSON

Kingsgate, North Park, Gerrards Cross

Railway Efficiency

November 5

SIR,—Because I made a slip in quoting Mr. J. H. Laundy in referring to passenger train miles, instead of passenger miles, he triumphantly denounced me in your November 2 issue for my ignorance of railway matters.

Although he continues to claim that passenger receipts were £116,996,000, against the £169,075,000 quoted in your columns from the same source, he makes no attempt to explain the difference, nor does he supplement passenger mile statistics by quoting their natural corollary of "empty-seat" miles. Will he please do so, "solely in the interests of statistical accuracy"? If season-ticket and unnecessary excursion traffic (which provide full loads) were omitted it would probably be found that over 75 per cent. of the seats on ordinary trains are hauled about the country empty—because of excessive fares.

Of course I know the answers to the B.T.C.'s financial problems!—in common with many home and overseas general managers, traffic officers and others, all with long years of experience in England. For the last 20 or 30 years, they have repeatedly been stated in your own Journal and the columns of many other journals, but have always been completely ignored by the accountants and other so-called experts in the Railway Executive and B.T.C. who think they know better.

Briefly, the solution is quite simple. In the main, it is only a matter of reducing fares, and replacing archaic little 10-ton to 16-ton wagons, by much less than half the number of high-capacity wagons. The practicability of using the latter has been explained several times.

Yours faithfully,

E. R. B. ROBERTS

Eynesbury, St. Neots

L.M.R. Outer Suburban Services

November 10

SIR,—With reference to Mr. Casserley's letter in your November 9 issue, the withdrawal of the 9.32 a.m. Tring-Euston train was necessary to save a train crew for the movement of vital freight traffic, but before its cancellation sympathetic consideration was given to the matter.

Mr. Casserley is in error in stating that cheap tickets are not available by all trains. They are, and the facility was fully advertised at the station for several weeks. That the arrangements are well known to the public is borne out by the number of cheap day tickets booked.

Yours faithfully,

GEORGE DOW,
Public Relations & Publicity Officer

London Midland Region, Euston House, London, N.W.1

THE SCRAP HEAP

Ode to Mr. Roland Halliday

In honour of the occasion (referred to in our Personal columns) on November 12, when Sir Felix Pole, formerly General Manager, G.W.R., gave a luncheon to Mr. Roland Halliday, a former Assistant to the Secretary, G.W.R., at the Great Western Royal Hotel, Paddington, Mr. C. T. Cuss, formerly Assistant to C.M.E., composed and recited the following ode:—

In days when steam had made its way
by inventions of the few,
Railways were made and some of them
paid, so there was much work to do
The best of them all was "The
Western" and the men who had
made it were great,
Like some of the men who followed
them, before it was "Run by the
State."
Now those who are left and remember
the way,
They helped, day and night, to make
"Western" pay,
Have gathered together, — in one
accord,
To honour an elder, around this board,
And the lines which follow, are meant
to convey
What's in our hearts and minds this
day,
About our old friend Halliday,
So first, please remember, the 10th of
November, in 1871,
Is the day he was born, after 12, in
the morn, and has since found his
place in the sun.

It was in 1887, he started his career,
And wisdom learnt, from friends he
served, for twenty pounds a year.
His father knew Sir Daniel Gooch, then
Chairman of the board,
And the spoke he put in Roland's
wheel, revolved and earned reward.
With diligence amongst the Deeds, in
office he ascended,
And learnt with care, how records there,
were made to be defended.

T'was after gauge conversion in 1892,
R.H. climbed up another rung, another
job to do!!!
This time, it was "Finance & Fire,"
in Secretary's office,
With pensions and allowances, at which
he was no novice.

His contacts, too, enriched his view of
life and service needs
His brain and pen, served famous men,
to aid their greatest deeds.
We'll ne'er forget, the fruitful seeds,
thus sown by "A. E. Bolter,"
These kindly deeds helped much his
needs and trained him as connoter.

By many personalities, R.H. was much
inspired,
And most of all, by Felix Pole, who
never could get tired.
When as G.M. he forged ahead, with
schemes of great expansion,
With vision rare and courage great, he
kept men gay at work and play,
Which proved a powerful stanchion.
This long and faithful service was
marked by further fame.
It was in nineteen twenty-six, that
Halliday became
Assistant to the Secretary; his name is
Freddie Davis
For "Western Men"; he held the pen
and key, described as *clavis*.

'Twas then he filled the post of clerk
to Locomotive Committee;
Its records show what makes wheels go
from West Coast to the City.
This post he held in difficult days, the
aftermath of war,
Until in 1930, he completed his good
score
Of forty-three long years "not out"
when Halliday retired
And twenty-one years later still, his
records are admired.

To end this ode on lines which cheer
And sweeten each succeeding year,
I venture now to briefly mention
How food and wealth come by
invention;
So when our British locomotives
Are slowed by costly "go-slow"
motives,
It is quite plain for all to see
That brain and brawn *must now* agree
To make the "draw-bar" pull one way
And make our British Railways pay
To save our State, and Halliday!

Peat for the Puff-Puff

Presumably there will be a rather unusual aroma about the peat-burning locomotive which, as the Dail has been told, is to be built for trial on Irish railways. The "peat reek" has been known as a characteristic of the Irish countryside and also as a constituent in Irish whisky, but it has not hitherto been attached to railway locomotion. The aroma, though unusual, can hardly be so attractive as the surplus coffee which, in years between the two wars, was sometimes heard of as being burnt as locomotive fuel in Brazil because of a slump in world markets for coffee.—*From "The Manchester Guardian."*

"We must try to recapture the same magnificent esprit de corps, gentlemen, that marked our work during those dark days when we were threatened by Nationalisation"

[Reproduced by permission of the proprietors of "Punch"

Lightfingered

A new schoolboy craze—throwing electric light bulbs from the windows of railway carriages—is worrying railway officials. More than 200 bulbs have vanished from Ipswich-Felixstowe trains.—*From the "Daily Mail."*

Train Lighting in 1881 and 1891

Seventy years ago this autumn, the first Pullman car to be lighted by electricity was placed in service on the London Brighton & South Coast Railway. Current was supplied by accumulators. Besides complaints by passengers that the new lighting prevented their sleeping, this system was evidently somewhat unreliable and it gave a good deal of trouble, and in consequence only 16 trains had been equipped with it 10 years later, with the result that the company was considering their conversion to gas lighting. About that time gas lighting was installed in the L.B.S.C.R. Royal train, but it is said that Queen Victoria, distrusting such innovations, ordered the former oil lamps to be restored. — *From the "Sussex County Magazine."*

Horse Sense

(*see "Railway Horses Retire" in Scrap Heap of November 9*)

Where are you going to, Dobbin dear,
When you quit this hectic atmosphere?
Will you rusticate in the country, where
You can drink deep draughts of the
sweet fresh air
And swap for a hayfield's scented smell
This carbon monoxidal hell;
Or will you miss old London Town
And find it hard to settle down
To quiet days and rural joys,
Far from the murky maelstrom's
noise?

Don't imagine you can find no bliss
Away from the great metropolis,
Even though memory puts a gloss
On Nine Elms, Broad Street, or Kings
Cross.
No doubt it's fine to think you still
Could lug a load up Ludgate Hill,
But, if your working days are over,
Be content to spend the rest in clover;
I can think of a better fate for you
Than ending up as a pot of glue.

Did I hear you say, as you munch your
chaff,
"You humans make a good horse
laugh.
"I'm going where good, green grass is
grown
"And a horse may call his soul his
own,
"And 'what's more' chum—but keep
this dark—
"I shan't come back as a fifth-grade
clerk!"

A.B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

NEW ZEALAND

Large Deficit Expected

An estimated net deficit of £2,200,000 is expected in the railways working account for the year ending March 31, 1952. The Minister of Railways states that the great increase in the cost of imported materials and the wages bill is causing concern to those responsible for railway finance. Detailed estimates make it certain that there will be a heavy loss, in spite of adjustments to fares and freights made in May last year. A heavy item of expense has been imported coal, which has had to be brought in to allow New Zealand coal to be available for homes and industry.

SOUTH AFRICA

Timetable Revision

From November 26, revised passenger schedules will come into operation. Extra trains will be run on most main lines and most of them will continue until the beginning of February, 1952. On some important main line routes running times will be improved. The existing 8.30 p.m. train from Johannesburg to Durban will leave at 10 p.m., saving 4 hr. 5 min. There will also be additional fast trains running between Johannesburg and Cape Town both *via* Kimberley, and *via* the Orange Free State; the "Blue Train" will continue to run on Mondays and Thursdays in both directions. The routes from Johannesburg to East London, Port Elizabeth, and Mossel Bay will also be served by more frequent trains.

Goods Traffic

The total goods traffic moved by rail in the first seven months of this year was 36,732,518 tons, compared with 33,874,911 tons in the corresponding period last year, an increase of 8 per cent. During this period 993,881 tons of cement and 10,353,556 tons of coal were carried, representing increases of 16 per cent. and 7 per cent. respectively over last year's figures for the same period.

New Rolling Stock

During September this year 223 goods wagons and 21 main line coaches were placed in service. All the wagons and 15 main line coaches were built in the Administration's workshops. The remaining coaches were imported.

Cape Midland Line Improvements

The first of new deviations on the Port Elizabeth-De Aar line was begun in July, 1950, between Bushman's River and Longhope. The object is the shortening of the line, and a reduction in curvature and grading. When finished, the maximum gradient will be 1 in 80 compensated. Heavy earthworks will be necessary and six tunnels varying in length from about 700 ft. to 4,000 ft. will be built.

Work begun on the 1,452-ft. tunnel near Sheldon in December last has been driven through and 540 ft. of concrete lining and the south portal have been completed. In June work began on a second tunnel 700 ft. long and on a 20-ch. curve. Work is well advanced on most of the approach cuttings to the remaining tunnels, and on the earthworks in general. Of an estimated total of 1,500,000 cu. yd. to be excavated, 300,000 cu. yd. have been completed.

The estimated cost of the deviation is £2,683,150. It is planned to open portions of the line to traffic as they are completed. The first section will probably be opened during the first half of 1952. It is not expected to complete the whole until 1955.

A second deviation, between Golden Valley and Cookhouse, was begun in May. It is just over two miles long and is estimated to cost £52,000. Most of the work is done and the section will be completed by the end of the year.

CANADA

Progress of Ungava Line

Forty miles of the 340-mile line from Sept Iles, on the Gulf of St. Lawrence, to the iron-ore deposits in Ungava, have been completed, and investment in the development of the iron mines will be more than $225,000,000. About $100,000,000 will be for construction of the railway. Some of the problems of construction are stated to be greater than those faced by the builders of the railways through the Rocky Mountains.

MEXICO

Relaying and Widening

With the completion of relaying with 112-lb. rail on the Mexico-Nuevo Laredo main line, plans are in hand to lay heavy rails on other sections, particularly Irapuato-Guadalajara, Irapuato-Jiménez, Monterrey-Tampico, and San Luis Potosi-Tampico.

The widening between Mexico City, Puebla and Oaxaca will be completed at the end of this year or in January. It is hoped to inaugurate the doubling on February 5. On the widening to Oaxaca 112 lb. rail is being laid.

Orders in U.S.A.

The National Railways are awaiting delivery of a large amount of heavy rolling stock and rails from the United States. A total of 86 diesel locomotives and 1,600 freight vehicles has been ordered from the U.S.A. Orders were placed several months ago but were held up because of delay in signing of an agreement whereby Mexico obtained a total of $56,000,000 from the Export-Import Bank for materials needed to replace existing equipment.

Further orders will be placed as soon as negotiations are completed with the Bank for new loans totalling $19,000,000, all to be used for the purchase of diesel locomotives and freight vehicles. Of orders placed for 1,000,000 tons of heavy rails, half have been already received and laid on trunk lines, including that between Mexico City and Nuevo Laredo. It is expected that 3,250 miles of new heavy rail will be laid throughout the system.

ARGENTINA

Rosario-Puerto Belgrano Line

The General Mitre Railway has taken over from the General Roca Railway the 397 km. of the former Rosario-Puerto Belgrano Railway between Capitán Castro and Almirante Solier. It now operates the whole of this main line except 25 km. between Almirante Solier and Bahía Blanca. The original division of the R.P.B. line was roughly into two equal parts: General Mitre Railway, Rosario to Capitán Castro (394 km.); General Roca Railway, Capitán Castro to Bahía Blanca (422 km.).

Dining Cars on Belgrano Railway

The General Belgrano Railway has introduced second-class dining cars on its principal trains between Retiro (Buenos Aires) and Tucumán.

Runaway Railcar

A Ganz diesel railcar of the General Belgrano Railway running between Jujuy and Salta broke down when approaching Salta. The passengers alighted and for some unexplained reason the railcar broke away unattended and ran down the mountainous line from Mojotoro to General Güemes (27 km.) in 17 min. No damage to material was caused.

Corporal Farina Halt

A new halt on the General Urquiza Railway, 18 km. from the F. Lacroze terminal, has been named Cabo Mayor Farina, after the corporal of that name who was killed while helping to subdue the abortive revolt against the Government in September.

AUSTRIA

New Vienna South Station

The Vienna Stations, which are old and were damaged in the war, are unable to cope with the requirements of modern traffic. It has long been intended to improve them, and after the war plans were drawn up which also envisaged a connection between the rail-

way installations and the municipal tramway system.

The lack of adequate funds compelled the railways to abandon the original project of a single central station in place of the existing East Station and instead to construct two, a new West Station (replacing the old one) and a South Station, replacing the present South and East stations. The new stations will handle both long-distance and suburban traffic.

The works at the West Station are well advanced; the booking offices will be ready by the end of this year. The South Station is still in the preliminary stages as the material from the dismantling of the old East Station is having to be used for it. The construction of the South Station is beginning this Autumn and will be completed in two stages. In the first, seven tracks will be provided for the south and east traffic; later, two more will be added.

By the combining of the South and East Stations, traffic working will be much simplified and less costly. The services for the public will be concentrated in the hall. In view of the difference in ground levels, escalators leading to the platforms will be installed. The platforms will have umbrella roofs.

Enzigerboden-Weissee Funicular

A new funicular connecting the Enzigerboden with the Weissee has been inaugurated as part of the scheme of construction of railway power-houses in the Stubach valley. In the first place it will convey material for the construction of the basin of the Weissee.

Although the configuration of this terraced valley is ideal for the construction of power-houses, the access to the terraces is difficult. The Enzigerboden is reached by a road built in 1921, but in 1936, when the construction of the Weissee Basin was planned, the first problem was that of creating a means of communication to extend the future traffic above the Enzigerboden. A funicular originally constructed is obsolete, and has been replaced by the new funicular.

A partial passenger service may be possible later. When it is introduced, the funicular will reach the centre of the western part of the Glockner Group, giving tourists access to fine scenery, and will become an important means of communication in the region of the Hohen Tauern. There would be cars with accommodation for 25 passengers.

WESTERN GERMANY

Coal Shortage

It is announced from headquarters at Offenbach that the Federal Railways now are placed in a serious situation because of insufficient coal allocation. Twenty-eight express and semi-fast trains, originally planned to run throughout the year, have therefore had to be withdrawn from the forthcoming winter timetables; 120 slow trains will be withdrawn on Sundays. These alterations have already been made in the winter timetables. The Federal Railways have also arranged to withdraw approximately 100 long-distance trains and 426 local trains if the coal shortage becomes worse. These withdrawals may be made at short notice.

Container Traffic

The Federal Railways cannot at present meet all demands for containers. Orders for some 2,000 open containers were placed some months ago, and 500 are expected to be available in the coming weeks in time for the sugar beet traffic, the balance to be delivered early in 1952. In addition, 1,000 covered containers were ordered recently.

Additional vehicles for conveyance of containers by road are to be acquired. The present fleet is inadequate, but negotiations between the Federal Railways and the Federation of West German Motor Vehicle Builders show a trend towards a less complicated type of vehicle than that at present in use.

In January last, the Federal Railways owned 34,000 containers of all types, compared with 19,000 two years previously. There are few privately-owned containers in Western Germany, unlike France, where, in January, 1951, out of a total of 34,400 containers of all types, 28,400 were privately owned.

Publications Received

The Great Western Railway—An Appreciation. By O. S. Nock. Cambridge: W. Heffer & Sons Ltd. 9 in. × 6¼ in. 185 pp. Illustrated. Price 18s.—Mr. Nock set himself a difficult task in writing an appreciation of so famous a British institution as the Great Western Railway. Undoubtedly he has succeeded and in doing so has avoided either writing a straightforward history of the company, or simply committing to paper a series of impressions. He has, in fact, combined something of both methods and at the same time shows an able grasp of the G.W.R. tradition. To those for whom something went out of life on the extinction of the G.W.R. in 1948, this will be an essential book, to others enthusiastic to a lesser degree it should make a fascinating and worthwhile study.

British Railway Track, Flat Bottom Track Supplement—Design, Construction and Maintenance. By C. L. Heeler. Published by the Permanent Way Institution, 1951. 9 in. × 5½ in., 42 pp. Illustrated; Stiff Cover; Price 6s.—This well-produced and handy volume begins by explaining that since the earliest experiments on British railways with flat-bottom track in 1936, the 131-lb., 110-lb., and 113-lb. rail sections have been tried and successively abandoned as standard in favour of two new sections, 109 lb. and 98 lb., which replace the 95-lb. and 85-lb. bull-head sections, respectively. The new sections of rail and their fittings and fastenings are described in detail, including forged and machined junction fishplates, insulated fishplates, and types of base-plate, spring steel clips, and spring spikes.

The uses of suspended and semi-supported joints are discussed, and the likelihood of a special 70-lb. rolled steel section is suggested as a standard check rail. Though pre-stressed concrete sleepers are proving satisfactory in secondary track and may in future be used under the new rail sections, treated softwood sleepers are still preferred for main lines. The lumping and pre-assembly methods of flat-bottom track renewal are also described, with notes on the driving of spring spikes to gauge for correct tensioning and retensioning.

Switches and crossings and their attachments are concisely dealt with in Part II, with the assistance of useful tables giving details of switches, base-plates, spacings and fittings; others show full dimensions of parts for crossings of various angles, turnouts and single and double slips. The subject is treated in a thoroughly practical manner throughout, and the half-tone and line illustrations are excellent.

Simpulsic Variable Capacity Pumps.—Details of a variable capacity pump for use with acids, alkalies, slurries, and so on, are contained in a leaflet issued by Ames Crosta Mills & Co. Ltd. With this pump, the liquid is forced through the pipeline by the action of a flexible tube which is subjected to alternate pressure and suction impulses by surrounding oil, a method which it is claimed is relatively new. The pump delivers at any rate between zero and maximum discharge, and is infinitely variable by manual or automatic control without interruption of discharge. Operational instructions and a schematic diagram are included in the description.

D.S.G. Schlafwagen-Fahrplan Winter 1951-52. Frankfort-on-Main: Deutsche Schlafwagen-und Speisewagen-Gesellschaft. Gratis.—The current timetable folder of the German Sleeping & Dining Car Company, the successor of the Mitropa Company, contains schedules of the company's services and plans of types of stock in use, including centre-corridor, longitudinal, compartment (second class) and Pullman (third class) sleeping car. The cover bears the familiar pre-war German State Railways eagle symbol, and is coloured the familiar Mitropa maroon.

Welding Plant and Accessories.—A complete catalogue illustrating the entire range of electrodes, plant, and accessories which they manufacture for automatic and manual arc welding, has been issued by the Quasi-Arc Co. Ltd. In addition to the products described this booklet fulfils a need by including notes on the choice of the correct electrode for particular types of work and the choice of the correct arc welding plant.

Braking of Swiss Rubber-Tyre Coaches

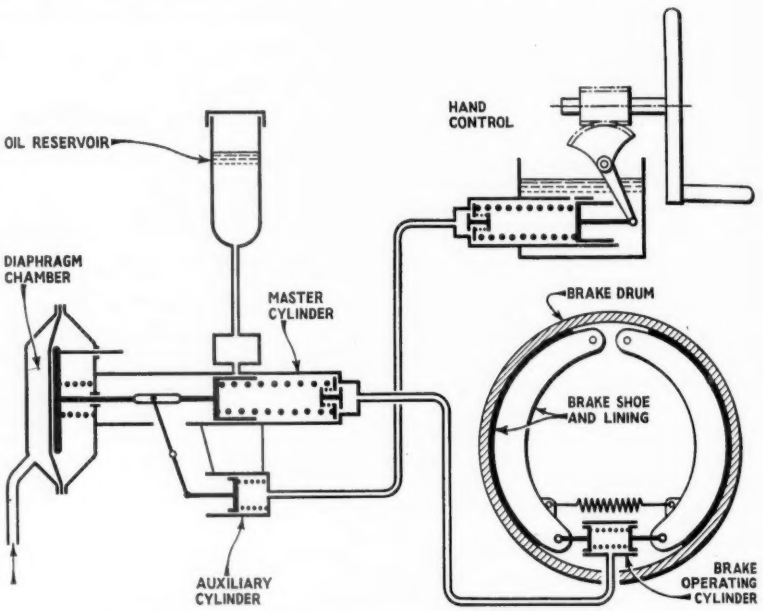
Oil-pressure system controlled by the normal air brake installation

WHEN railway vehicles are equipped with rubber tyres, an alternative is necessary to the conventional system of braking by means of blocks acting on the wheels. The two Swiss lightweight coaches with Michelin type wheels described in our May 18 issue are equipped with brake drums in which the shoes are operated by oil pressure; the braking effort is proportional automatically to that of the ordinary air brake acting on other vehicles in the train.

In the accompanying diagram the arrangements are shown by which the air pressure of the Oerlikon automatic brake acts on the wheels through the intermediary of the oil system. Air entering the diaphragm chamber from a special expansion chamber and reducing valve creates an oil pressure in the master cylinder that bears a relation to the air pressure governed by the surface areas of the two pistons. Oil is conducted by copper tubing to the operating cylinders, inside the brake drums, where it acts on the shoes. The oil reservoir is connected with the master cylinder when the brakes are off.

Manual operation is obtained by means of a handle and worm drive, acting on a piston whereby pressure is created in the auxiliary cylinder and the piston in the master cylinder is operated through the mechanical linkage shown.

A separate hydraulic system of the type described is provided for the ten brake drums of each bogie, although only one bogie is equipped for hand braking. The absence of mechanical brake rigging has contributed to the light weight of the vehicles, the braking equipment accounting for a little under 3 cwt. Braking characteristics of the rubber-tyre vehicles are closely similar to those of the standard lightweight stock, so that they can be operated in the same classes of service. The air-controlled oil brake of the type described can be used in conjunction with any air braking system, and no change in the method of brake manipulation is involved when vehicles so equipped are included with standard coaches in the same train. Because of the importance of correct oil pressure to the functioning of the system, two gauges are connected to the master cylinder for each bogie and are mounted at the base of the side walls on both sides of the coach so that pressures can be checked during brake tests.



Schematic diagram of air-controlled oil brake system

ACCIDENT IN BAVARIA.—Sixteen persons were killed and 14 seriously injured on November 8 when a passenger train ran into a goods train at Walperskirchen, about 25 miles east of Munich. Emergency operations on some of the injured were performed in a special train from Munich equipped with an operating theatre and staffed by a surgeon and six nurses.

CLYDE COAST STEAMER SERVICES.—For some time British Railways have been concerned over the loss in operating the Clyde steamer services which this year will be about £150,000. This subject has been under discussion with the Clyde Coast authorities for several years, and as a result British Railways are now constructing at a cost of £1,000,000 seven new vessels to operate what is best described as a ferry service between the principal points. Study of the problem has led the railway authorities to the conclusion that the best method of making a reduction in the loss without impairing the main services is to continue the policy of eliminating calls at the less frequented piers. On the other hand the Dunoon service will be augmented by 50 per cent. and an improvement will also be made in the service between Wemyss Bay and Rothesay.

RAILWAY STAFF AMENITIES AT CARLISLE.—Work is to commence soon on the provision of new amenities for the staff at Carlisle (Upperby) Traffic Yard which will involve replacement of existing structures by a brick building and the installation of electric lighting. In announcing this £12,000 scheme the London Midland Region of British Railways states that the new accommodation will be as modern as any in the country, and will include a messroom, central heating chamber, hot water to all washbasins and sinks, and a drying room.

ASSOCIATION OF CONSULTING ENGINEERS.—The report of the Association of Consulting Engineers for the year ended April 30, 1951, records an increase in membership, from 303 in April, 1950, to 327. The number of members of the Association has now been registered as not exceeding 500 and the committee has power to register an increase whenever it thinks fit. The attention of members is invited to the fact that, although the association is securing a good supply of new members, 35 in the year ended April, 1950, 45 in 1949, and 28 in 1948, normal wastage from death and retirement is considerable, resulting in the actual increase in numbers being not so great as might be expected.

BRITISH RAILWAYS TO FORM A STAFF ASSOCIATION.—One of the largest "clubs" in the world will be inaugurated on January 1, 1952, when the British Railways Staff Association is founded. This will be open to all the 600,000 railway staff, their wives and children, retired staff, and widows of railwaymen, which means that well over a million people will be eligible to join. The association will offer scope for the organisation of all kinds of sports, pastimes, music, drama, arts and crafts, and other events. It is planned to stage competitions on a regional basis and eventually through the Joint Advisory Council for Welfare on a national basis. Facilities will be available to the staff of other Executives of the British Transport Commission where practicable. Membership will be voluntary and the subscription will be 4d. a week.

Modernised Marshalling Yard at Toton—1

Up hump yard remodelled, enlarged, and equipped with rail-brakes, automatic point operation, and other modern features

BRITISH RAILWAYS have recently completed what is probably the largest project of its type ever undertaken in this country, that is the conversion of Toton Up hump marshalling yard to an enlarged and remodelled design, without having to close it to traffic completely at any time during the period of reconstruction. The scheme involved taking up the whole of the sidings and connections (some 16 miles of track), altering the levels throughout, laying down permanent way (approximately 27 miles) to an improved yard design, erecting new buildings, installing railbrakes and other modern equipment.

The Toton yards, of which there are two—the Down having been converted to mechanised (railbrake) operation in 1939—are situated just outside the southern fringe of the Notts & Derby coalfield, on the main Chesterfield-Trent (Erewash Valley) section of the London Midland Operating area, see Fig. 1, and extend over 1½ miles between Long Eaton and Stapleford & Sandiacre.

The Up yard, which is separated from the Down by the main running lines, deals mainly with loaded coal wagons arriving " rough " from collieries and yards north of Toton, and its primary function is sorting the labelled vehicles into destination or direction order so that full train loads can be assembled for working principally to the South and West of England. This comprises a considerable volume of long-distance traffic and, therefore, Toton is an important pivotal point on the Midland Division of the London Midland Region —junctions immediately to the South in the vicinity of Trent Station giving egress in the Nottingham, London, Birmingham and Derby directions, as shown in Fig. 2.

Before 1900, horses were used to move wagons at Toton, but about that time the yard was converted to hump shunting by steam locomotives, with manual methods of hand braking and point operation.

For a long time the Up yard had been inadequate in capacity and costly to operate. The arrival lines were of insufficient length to accommodate the bigger trains hauled by modern locomotives. The gradients, though suitable in the days when all vehicles had grease-lubricated axleboxes, were unsatisfactory for the running of the present-day mixture of wagons having oil and grease axleboxes respectively, and because of

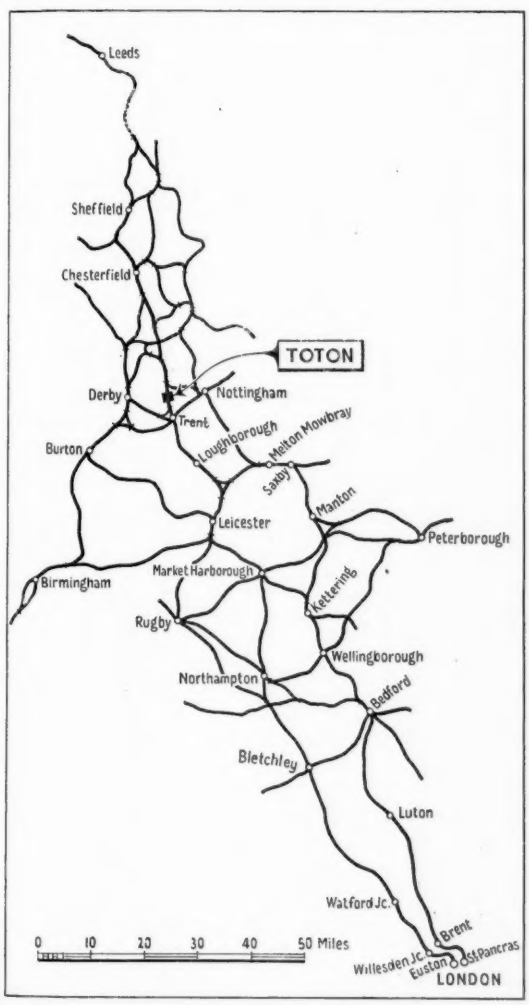


Fig. 1—Positional diagram of Toton in relation to main lines

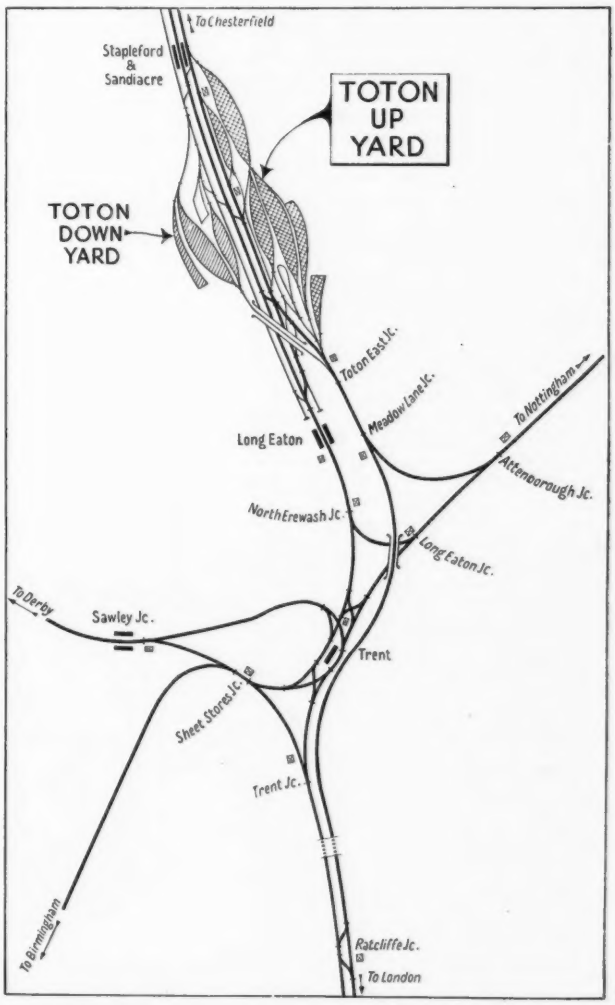


Fig. 2—Local positional diagram, showing junctions in the vicinity

the growth in the size and weight of wagons generally. The facilities for temporarily accommodating surges of traffic due to fluctuations in output at collieries, or inability of destination to accept currently, were inadequate. These and other features which needed bringing up to date so that the yard could meet modern operating requirements, resulted in the decision of the former London Midland & Scottish Railway to develop a scheme for its modernisation.

Preliminary investigations had revealed that the problem could not be resolved satisfactorily by any process of additions, or partial alterations, to the layout, and that, as in many other instances where yards continue to function to designs drawn up many years ago by individuals with different ideas, and before the study of shunting of wagons had progressed very far, the only way to create an efficient machine for sorting wagons at the Up side at Toton was to embark on a 100 per cent. remodelling.

Traffic Handled

Normally the Up yard deals with up to 70 trains and trips in and about 60 trains out during each weekday. The number of wagons shunted over the hump in 24 hr. varies from approximately 3,000 on the quieter days to 3,900 on the busier midweek days, though the latter figure is not regarded as the maximum possible. The average number of wagons a cut in the sorting, which is mostly primary at this yard, is between two and three. To deal with this number of wagons economically and to allow for an eventual increase, the L.M.S.R. had decided, following on satisfactory performance at its only mechanised yard (Toton Down) since 1939, and particularly during the difficult war years, to incorporate, with certain improvements, a similar method of operation at the Up yard, though in the case of the Down yard, physical alterations were confined to the hump and point area.

The new Up yard was therefore designed in accordance with the requirements for remotely controlled railbrake operation, in substitution of the former method of controlling the speed of running of vehicles from the hump, which was by means of the hand brakes on wagons. Under the old system all the points leading into the sorting sidings were operated mechanically from a series of cabins. This method was abandoned in the new design and replaced by power operation combined with automatic working and throughout route setting.

The preparation of the "mechanisation" scheme had only just been completed by the L.M.S.R. when nationalisation of the railways came into effect, but sanction to carry out the whole of the work was given. In Fig. 3 is illustrated broadly the layout and gradients at the old, as compared with the new, yard and how the siding accommodation at the new yard has been enlarged.

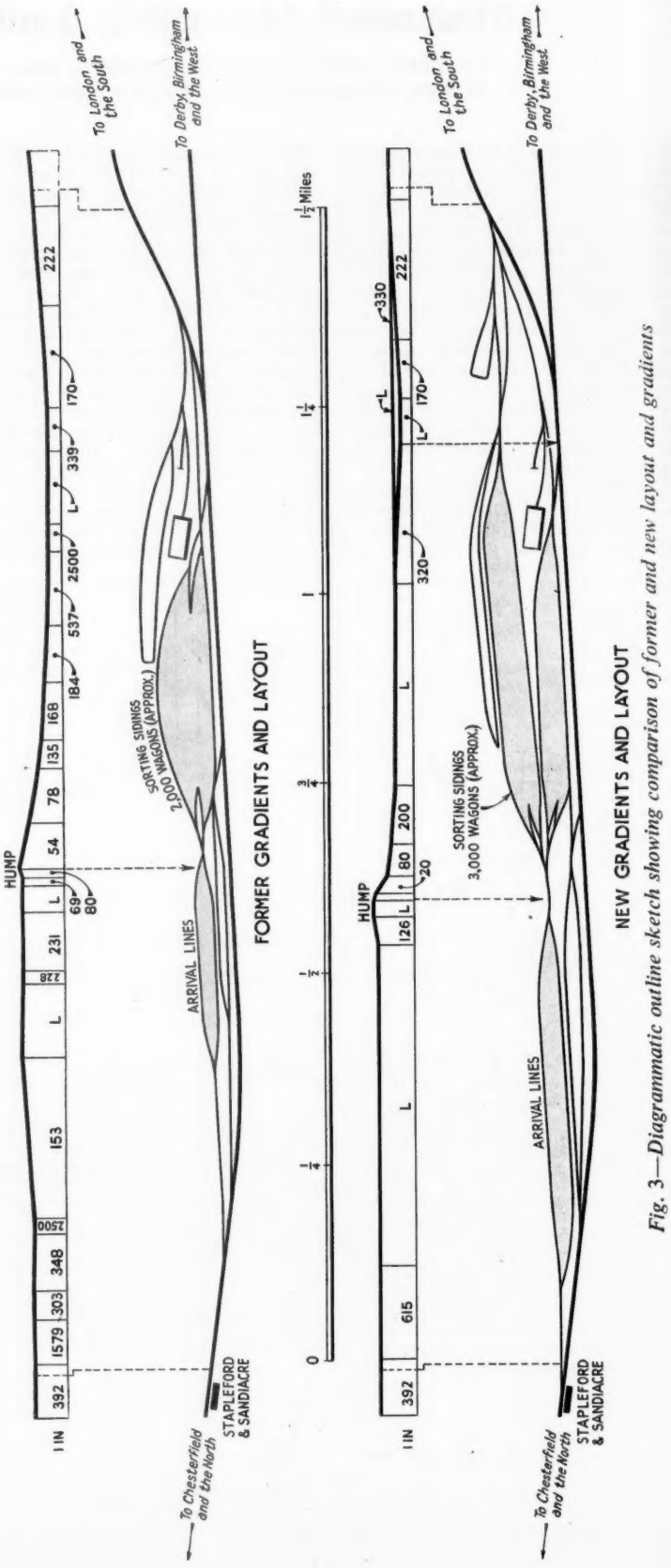


Fig. 3—Diagrammatic outline sketch showing comparison of former and new layout and gradients

Portion of widening nearing completion, and control tower, railbrake pits, and subway under construction

From the commencement of essential preliminary works to completion of the last main stage in December, 1950, approximately three years elapsed. As already mentioned, at no time was the yard completely closed to traffic during the reconstruction period. For two years, relief had to be given and this was done by diverting a portion of the normal traffic to other yards, under a carefully-planned traffic schedule. A similar process was equally necessary in the case of the traffic not diverted, to conform to the successive engineering stages within the yard—in fact for a time part of the old yard was in use simultaneously with part of the new.

Departmental Co-operation

The carrying out of the work necessitated a high degree of co-operation to dovetail the requirements of the Civil, Mechanical & Electrical, Signal & Telecommunications, and Carriage & Wagon Engineering and the Estate and Operating Departments. Apart from numerous preliminary stages, including acquisition of small strips of land, fencing the new boundary and a public footpath, which had to be diverted, building a new bridge over the river Erewash, reproducing on a fresh site a civil engineering store, which was in the way of the new yard layout, diversion of overhead wire and cable routes, the scheme was divided into six main constructional stages. The first was carried out just beyond the outer perimeter of the old layout. As soon as that stage was completed and handed over to the Operating Department, an adjacent inner longitudinal section was made over to the Civil Engineer for conversion to the new design. This process was repeated in sections across towards the main line and the last "mechanised" stage was actually brought into use on September 4, 1950.

About 430,000 cu. yd. of earthwork were involved in readjusting the old levels and enlarging the yard. The enlargement included widening in a deep cutting, which extends for some 600 yd. on the outer (East) side of the yard. The accompanying illustration shows a portion of this cutting slope as the work on it was approaching completion, and also illustrates the control tower, railbrake pits and subway under construction.

New structures, including four rebuilt main-line signalboxes, hump room, control tower, staff accommodation, railbrake pits and subway, were constructed, and a new hump signalling system, electric lighting (in place of the former gas), loudspeaker communication, improved main-line connections, and so on, together with railbrakes and power-operated points leading from the new hump into the sorting sidings, were all installed and brought into use, in sections, simultaneously with the major reconstruction stages.

A single line diagrammatic plan showing the whole of the new Up yard layout is given in Fig. 4. For incoming trains there are 10 arrival lines, off which they are propelled over a single line hump with an initial falling gradient of 1 in 20. From the hump, the wagons having been uncoupled already into the necessary cuts, run by gravity into one or other of 37 sorting sidings. Due to physical limitations it was not possible to construct a fan of departure sidings, but improved con-

Entrance to arrival lines as seen from Stapleford & Sandiacre signalbox

nections with the running lines, shunting facilities, and subsidiary sorting and holding sidings have been provided.

Reception of Trains

As previously mentioned, one of the disabilities associated with the old yard was the inadequate length of the arrival lines. In some instances, incoming trains had to be divided into two portions on the Up goods line before entering. Others slightly in excess of the holding capacity of the arrival line on to which they were routed had to be drawn forward towards, or on to, the hump to allow the humping engine to proceed behind the particular train, as the rear end blocked the entrance to other arrival lines. To avoid the delay which this entailed, the new arrival lines were made sufficiently long to hold the longest train likely to be received. By acquiring small strips of land, it was found possible to make a new facing connection in the Up goods line opposite to Stapleford & Sandiacre Station platforms, some 300 yd. north of the former entrance, giving direct access on to arrival lines and avoiding the single line attenuated approach lead which previously existed. Main-line crossover facilities in the vicinity were readjusted accordingly.

Formerly, incoming trains, after leaving the Up goods line were routed on to particular arrival lines from a sidings signalbox known as Toton Up Sidings North. Humping engines were also turned on to the arrival lines from this box. Under the Up yard scheme this sidings signalbox was abolished, and the work incorporated in the re-built Stapleford & Sandiacre main-line signalbox, which is situated in a convenient position with the main lines at the front and the entrance to the arrival lines in rear. Each of the ten new arrival lines can hold 75 wagons with engine and brakevan; they are dead straight between diverging and converging ends. There is a slight rising gradient of 1 in 615 at the entrance, and a rise of 1 in 126 through the point area at the hump end; in between, they are on the level.

Hump Engine Run-Round

The former layout consisted of ten arrival lines, but as one had always to be left clear so that a humping engine could run from the hump before proceeding behind a train, the total available to receive trains was nine. As will be seen from the single line diagram of the yard layout, Fig. 4, an additional separate line is now provided (numbered 6) exclusively as a run-round road for hump engines, centrally along the arrival line fan and terminating in buffer stops at the Sandiacre end. There is no direct access off the Up goods line, but there is egress on to all ten arrival lines.

With this layout it is possible for a hump engine to be proceeding behind a train on Nos. 7 to 11 whilst a train is entering any one of Nos. 1 to 5 which happens to be clear—and *vice versa*, thus avoiding opposed movements if the hump engine proceeded back along the

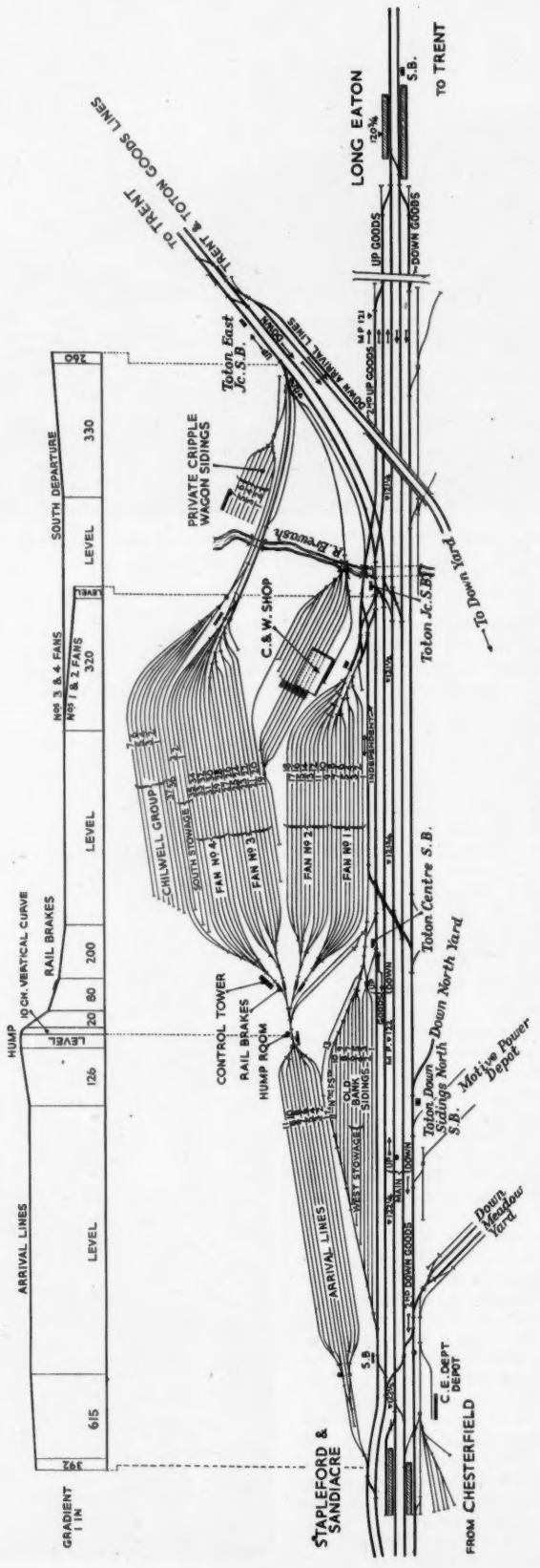


Fig. 4—Single line diagram and gradient profile

arrival line off which it had just humped a train, and delay in waiting while an incoming train ran inside clear.

Entrance to Arrival Lines

The entrance to the new arrival lines is at the rear of, and controlled from, Stapleford & Sandiacre signalbox. The points are operated mechanically and the area is track-circuited in sections from the Up goods line to clearance point inside each arrival line and indicated on the signalbox diagram. Thus, in fog, or other conditions of bad visibility, the signalman can see from the diagram whether the rear end of a train has passed in clear or not.

The signalman may route an incoming train on to any arrival line which is shown " clear " on a panel, which is provided separate from the signalbox diagram, unless he has been instructed by the person in charge of operations at the hump to direct a train on to a particular arrival line. This " arrival line occupation " panel, diagram of which is given in Fig. 5, is the front of a small cabinet on the instrument shelf in the signalbox and the upper portion is repeated in the building at the apex of the hump, known as the hump room.

The signalman can " block " any one of the ten arrival lines, but he cannot " clear." From the hump room the lines can be either " blocked," or " cleared," and the indications are repeated in the signalbox. Thus, when a humping movement is completed, the hump room operator " clears " the particular arrival line but, should it become necessary to occupy an arrival line from the hump end, he has the power to " block " it. Movements of the last mentioned type are only necessary in exceptional circumstances, for, as already described, an independent run-round road is provided for the hump engines, and this is used also for drawback movements out of the sorting sidings involving re-shunting.

It will be noted that the occupation indication panel consists of ten strip lights with a plunger below each, the strips being illuminated by a white light when the particular line is " clear "; when not illuminated it indicates that the line is " occupied." This panel in the signalbox also incorporates, in the lower portion, a route-proving installation, which operates in the following way.

Having decided on to which arrival line he will direct an incoming train, or a humping engine to proceed behind a train, the signalman first operates the points to set up the route and depresses the appropriate button. If the route is correctly set up, the corresponding small white light becomes illuminated and the signal concerned is released for one pull. Having pulled off the signal the route proving light is extinguished. In the case of arrival lines Nos. 1 to 5 and 7 to 11 the occupation (strip light) indicator is extinguished when the appropriate button is depressed, thus reading " blocked " on both the signalbox and the hump room panels.

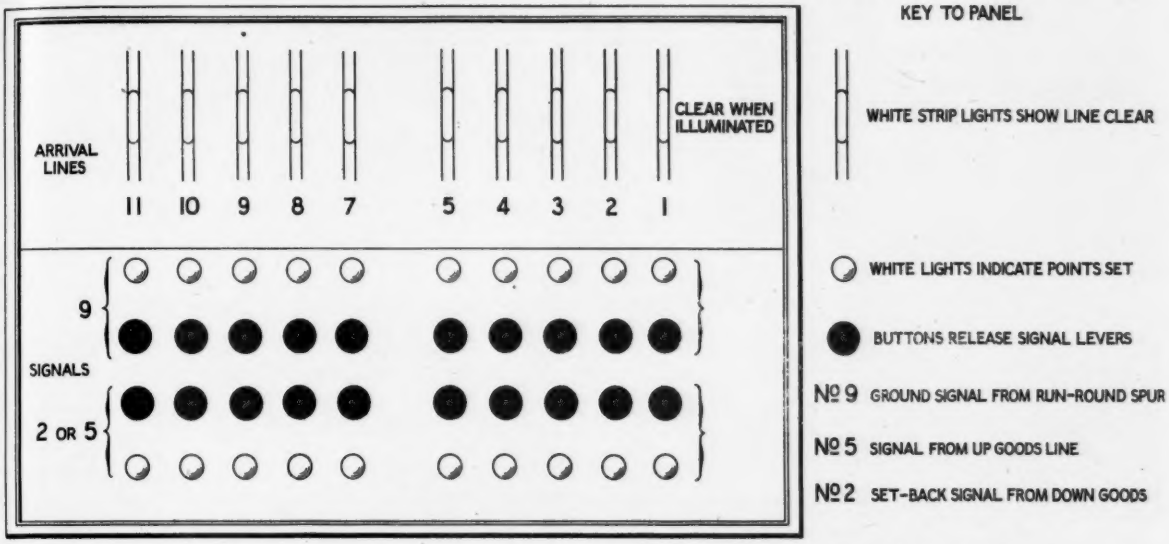

ARRIVAL LINES
11 10 9 8 7 5 4 3 2 1
CLEAR WHEN ILLUMINATED
9
SIGNALS
2 OR 5
KEY TO PANEL
WHITE STRIP LIGHTS SHOW LINE CLEAR
WHITE LIGHTS INDICATE POINTS SET
BUTTONS RELEASE SIGNAL LEVERS
№ 9 GROUND SIGNAL FROM RUN-ROUND SPUR
№ 5 SIGNAL FROM UP GOODS LINE
№ 2 SET-BACK SIGNAL FROM DOWN GOODS

Fig. 5—Arrival line occupation and route proving indicator, Stapleford & Sandiacre signalbox

(To be continued)

SCOTTISH SEED POTATO TRAFFIC. — On November 8, a special freight train with seed potatoes from Eassie, Angus, for shipment at Southampton to South Africa, left Perth South, Scottish Region. Since the opening of the 1951 season three specials have been run from Perth to Southampton with specially packed and boxed seed potatoes for overseas shipment. Large consignments of potatoes are also passing by rail from Perthshire and other points to Glasgow for shipment. To expedite the assembly of trains the former L.N.E.R. marshalling yard at Perth, which has been closed for some time, was reopened on November 1, and the marshalling yard at South Leith, Edinburgh, where normally only dock traffic is dealt with, has been used since October 29 for making up special trains with bulk loads for the Eastern Counties. Last year over 300 trains with Scottish seed potatoes were run *via* the East Coast route and special services were provided for traffic to Wales and the West of England *via* Carlisle.

TELEVISING RAILWAY CARRIAGE CONSTRUCTION.—For half-an-hour on the evening of November 6 the B.B.C. television cameras were focused on railway carriage construction at the Midland Works of the Metropolitan-Cammell Carriage & Wagon Co. Ltd. Under the main heading of " Other People's Jobs " the subject chosen by the B.B.C. was the manufacture of the 90 light-alloy surface line cars for the London Transport Executive described in our May 4 issue. While from an engineering point of view the time allotted was insufficient to do full justice to the subject, cameras covered various stages of the main assembly, up to the finished car at the end of the production line. Interest was sustained throughout by explanations given by executives of the firm in response to questions raised by the televiewer. Works personnel were selected to speak about their individual jobs.

THOS. W. WARD LIMITED PROFITS DOUBLED. —The group profits of Thos. W. Ward Limited for the year ended June 30 increased from £561,076 to £992,876. These were arrived at after deducting £1,064,290, against £819,340, for taxes, and making other allocations. There was a net profit of £842,873, against £418,109. The ordinary dividend is maintained at 15 per cent. by a final dividend of 10 per cent. and in addition a sum to cover a bonus of 5 per cent. will be set aside to be paid at an appropriate date. Comparative figures for the preceding year have been revised to exclude the profits of those subsidiaries whose shares were vested in the Iron & Steel Corporation Limited.

Modernised Marshalling Yard at Toton—1

Arrival lines as seen from hump, showing arriving train on No. 5, and in centre, hump engine run-round road

View from hump of approach to sorting sidings, with brake van slip and train engine release line to right

New Type of Signal Bridge, North Eastern Region

A neat design incorporating a second platform and tubular doll posts of minimum height

ONE of the essentials of safe railway traffic operation is that signals shall be clearly visible from a reasonable distance at all hours and that where several must necessarily be in the view of more than one driver, there shall be the least possible risk of confusion. Even on a plain double track the question of good visibility calls for careful attention and it is one on which opinions have altered somewhat in the course of time. The old very high signals, affording a sky background at a considerable distance, at times provided with co-acting arms lower down, are out of fashion now, although many still remain.

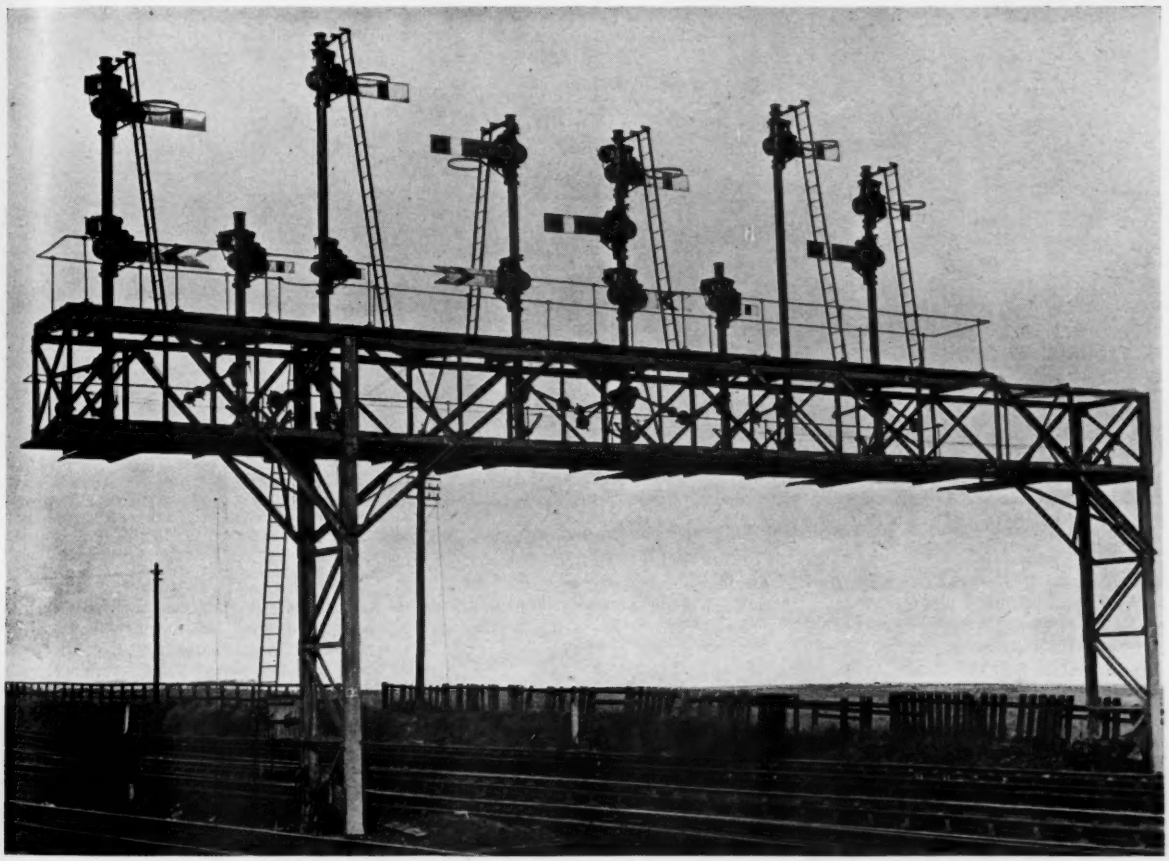
Where there are parallel lines and junction connections the problem becomes more difficult to deal with. The signal engineer, in placing the signals in the most suitable positions, requires to have—especially in the case of manually operated signals—the simplest working arrangements and to reduce to a minimum the number of moving parts to be kept in good order.

Outside the larger stations, having a number of approach and departure lines, much expense often has to be incurred in providing gantries and bridges, so as to bring the signals over, or close to, the lines to which they refer. This is important in clear weather, but in foggy periods becomes doubly imperative if delay, to mention nothing more serious, is to be avoided. On the former North Eastern Railway the signalling methods followed for many years resulted in a great number of such structures being provided, all of substantial design, with tall latticework posts and sometimes duplicate arms below. Other railways made rather less use of these arrangements and on the former Great Western Railway there were very few signal bridges.

Many factors enter into the design of signal gantries and bridges, depending on the local circumstances, and sometimes it has proved necessary to use very solid and expensive construction, particularly where several lines of way have had to be spanned and clearances have made it impracticable to have intermediate supports. The painting and re-painting of such structures also involves much time and money and calls for consideration when details of a design are being worked out. Whatever the design, these items of signalling equipment must involve an appreciable outlay both in first cost and maintenance.

Interest therefore attaches to what has been done at an important junction two miles south of Sunderland, on the Leeds to Newcastle *via* Hartlepool main line in the North Eastern Region, British Railways. A new type of signal bridge has been installed, as shown in the photograph reproduced above, in replacement of three of the older type which carried between them 23 semaphore arms on 21 posts. It has been designed by the Chief Civil Engineer of the North Eastern Region to the specifications of the Signal & Telecommunications Engineer, whose staff installed it, and it was manufactured by

(*Continued on page* 550)



Girder type signal bridge spanning four sets of lines near Sunderland, North Eastern Region

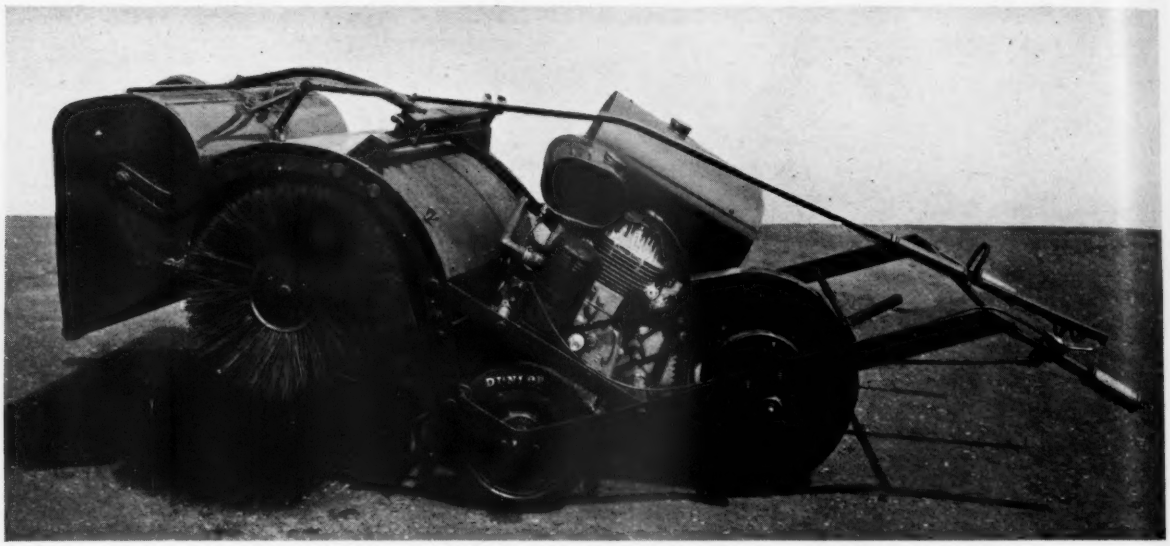
Combined Refuse Collector and Sprinkler

New hand-controlled power-driven machine for industrial premises and railway station platforms

THE photograph reproduced below shows the new Universal sprinkler-sweeper-collector introduced by Lewin Road Sweepers Limited—an associate firm of J. Brockhouse & Co. Ltd.—for handling all kinds of refuse wherever an even surface exists. Therefore it is equally suitable for work in factories and warehouses and on railway station platforms. Tipping is carried out from the operating position and clutch control, or the battery operating control. Steering is made easy by the swivelling front castor assembly. Petrol machines can be supplied in three sizes, 3 ft. 3 in., 4 ft., or 5 ft., while the electric type is available in the 3 ft. 3 in size only.

The machine illustrated is shown in the tipped position, ready for the rapid emptying of refuse, and is powered by a Brockhouse 248 c.c. four-stroke petrol engine. The capacity of the fuel tank is 1 gal. An alternative power unit is the Villiers Mark 25, 256 c.c. four-stroke engine. The water tank for the sprinkler holds 7 gal. The overall length of the 3 ft. 3 in. size sweeper is 7 ft., the height 3 ft., and the overall width 3 ft. 9 in., this size giving an effective width of sweep of 3 ft. Main drive is through chains *via* plate clutch, and brush drive through bevel gears from road axle. Brushes are fitted with wood centre stocks and may be re-bristled when worn. The limit of brush wear is approximately 9 in. The machine has a speed of 2 to 3 m.p.h.

The battery machine is powered by a Neco ½-h.p., 24-V. d.c. geared motor, controlled by a double operating contactor from the handlebar position, the latter ensuring a smooth and safe start. The traction batteries, which are replenished from a standard heavy-duty charging board, are of sufficient capacity to ensure that before recharging is required there is an average working period of 3 to 4 hr. Simplicity of design and "deadman" handle control are other features of the machine.



Lewin sweeper-collector in tipped position for emptying refuse

dust can be kept down by the use of a water sprinkler.

Two types of machine are made, powered by a petrol engine or an electric battery, and in both types the sweeper is operated by one person simply by applying pressure to the right or left control handles, to which are also fitted the engine throttle and patent

New Type of Signal Bridge, North Eastern Region

(*Concluded from page* 549)

Henry Williams Limited. It is a neat girder type structure spanning four sets of lines, and it carries eight steel tubular posts; on these there are placed 14 arms. The tubular type of post is being increasingly used now by several of the Regions and has a pleasing appearance. The height of the several dolls has been kept to a minimum by dispensing with individual platforms, and this brings the added advantage of keeping the arms as near as possible to the driver's eye level.

The bridge itself has two platforms; the lower enables the various cranks, balance levers, and other mechanical parts to be reached readily by the signal linesmen in the course of their inspection, oiling, and other maintenance work, an important facility to which at times insufficient attention has been paid.

In conjunction with the erection of this new signal bridge, the 70 lever interlocking frame at Ryhope Grange signalbox was replaced by a new one containing 65 levers and incorporating many of the latest electrical signalling controls, which greatly increase the factor of safety in working over that obtaining in earlier years with this type of signalbox.

UNITED RAILWAYS OF HAVANA.—The executive committee of the National Sugar Mill Owners' Association of Cuba has recommended its members to consider the purchase of the British-owned United Railways of Havana. Discussions on the future of the railway have been in progress for some time between the Cuban Government and representatives of the company.

SCOTTISH INDUSTRIAL SAFETY CONFERENCE.—On November 29, the recently formed Scottish Industrial Groups Advisory Council will hold a one-day conference on industrial safety. The conference, organised by the Royal Society for the Prevention of Accidents, will be held in the Glasgow City Chambers. The programme will include papers covering a wide range of subjects of interest to the industrial safety movement.

RAILWAY NEWS SECTION

PERSONAL

Mr. J. S. Maclay, Minister of Transport & Minister of Civil Aviation, has appointed Mr. O. F. Gingell (Transport) and Mr. S. M. A. Banister (Civil Aviation) to be his Joint Principal Private Secretaries.

Mr. W. A. Doble has retired as Chief Accountant, South African Railways, and has been succeeded by Mr. D. R. Hershell, formerly Understudy to Chief Accountant.

The Argentine National Railway Directorate has been replaced by a board of General Managers, under the Presidency of Dr. Miguel Revestido, General Manager of the General Belgrano Railway.

Mr. J. C. Kubale, Chief Engineer, Metropolitan-Vickers-GRS Limited, has been appointed Manager, as from October 1.

London Midland Region Appointments

The following appointments are announced by the London Midland Region:—

Mr. G. E. Woodhead, Assistant District Engineer, Derby South, to be Works Maintenance Assistant, Civil Engineer's Department.

Mr. J. H. Hambidge, Chief Freight Trains Clerk, Glasgow (Scottish Region), to be Assistant District Operating Superintendent, Leicester.

Mr. A. H. Williams, Assistant District Operating Superintendent, Barrow, to be Assistant District Traffic Superintendent, Chester.

Mr. F. A. Dadge, Assistant to Chief Accountant, Western Region, who, as recorded in our November 2 issue, has been appointed Senior Assistant to the Chief Accountant, was born in Swindon, and entered the service of the Great Western Railway in 1924 in the Department of the Chief Accountant at Paddington. After holding posts at both Swindon and Paddington, he became Chief of the Audit Staff at Swindon in 1946. Three years later he returned to Paddington as Head of the Ledger Section and in March, 1950, was appointed an Assistant to the Chief Accountant. Mr. Dadge is Chairman of the Accountants General Expenditure Sub-Committee and a member of various other accounting committees. During the war he was engaged on special work in connection with the Government Control Agreement.

Luncheon to Mr. Roland Halliday

On Monday, November 12, a luncheon was given by Sir Felix Pole, formerly General Manager, G.W.R., at the Great Western Royal Hotel, Paddington, in honour of Mr. Roland Halliday, a former Assistant to the Secretary, G.W.R., and a very old resident of Slough, who celebrated his 80th birthday on November 10. The guests included Mr. K. W. C. Grand, Chief Regional Officer, Western Region, British Railways, and some eighteen others whose lives totalled about 1,500 years and who had served the G.W.R. for about 1,000 years. The toast "Great Western Railway" was replied to by Mr. Grand. In honour of the occasion, Mr. C. T. Cuss, a former Assistant to the Chief Mechanical Engineer, composed and recited an ode, which appears in our Scrap Heap page.

Mr. C. W. Putsey, formerly Assistant Traffic Manager, Nigerian Railway, who, on the formation of the new Operating & Commercial Department, which includes locomotive running, has been appointed head of that Department, with the title of Chief Superintendent, began his railway career with the North Eastern Railway in the Dock Traffic Agents Office, Victoria Dock, Hull, in September, 1912. He was transferred to the District Superintendent's Office, Hull, and subsequently saw service in the Yardmaster's Office, Hull East, and Stationmaster's Office, Hull Paragon, before joining the Forces during the first world war. After 3½ years' service with the Forces, he was attached to the District Superintendent's Office, Hull, and passed through all sections of that office before joining the Nigerian Railway as Traffic Inspector in September, 1927. He was promoted Assistant Traffic Officer, and later became District Traffic Superintendent, and Assistant Traffic Manager.

Mr. C. W. Putsey
Appointed Chief Superintendent (Operating & Commercial), Nigerian Railway

Sir Peter Bennett has resigned from the board of Imperial Chemical Industries Limited.

Mr. Oliver Lyttelton has resigned from the Chairmanship and from the board of Directors of Associated Electrical Industries Limited. Sir George E. Bailey has been elected Chairman.

Mr. E. H. Discombe, a Delegate Director & Commercial Manager of Murex Welding Processes Limited, has recently retired.

Scottish Region Appointments

The Scottish Region has announced the following appointments:—

Mr. G. R. Dalgleish, Divisional Storekeeper, St. Rollox, to be Assistant Stores Officer, Scottish Region, Glasgow.

Mr. Henry Colley, Shedmaster, Corkerhill, to be Assistant District Motive Power Superintendent, Ayr.

The Eastern Region has announced the appointment of Mr. H. T. Bird, District Engineer, Peterborough, as District Engineer, Doncaster. He will take up his new duties in December.

Mr. C. F. Mayer has been appointed to a newly created post of Commercial Overseas Manager for Trico-Folberth Limited. In this capacity he will be responsible for decisions of major policy as far as the overseas activities of the company are concerned. Mr. Mayer has been Export Manager of the company since 1946. Mr. R. M. Van Dyck, formerly Assistant Export Manager, has been appointed to the post of Export Manager, and will undertake all duties previously carried out by Mr. Mayer.

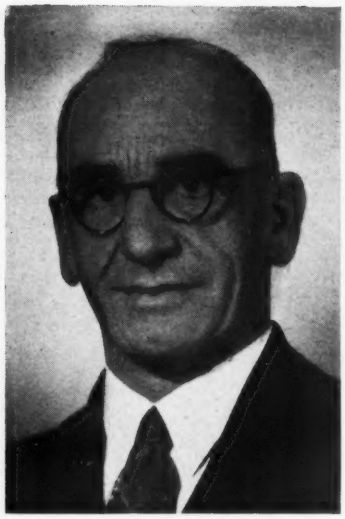
Mr. S. F. Holroyd and Sir John Rigby, Bart., have been elected to the board of Directors of Exors of James Mills Limited.

Presentations to Mr. Kirwan

Mr. D. Kirwan, who recently retired as Operating Superintendent, Coras Iompair Eireann, was the recipient of a presentation from Mr. D. Stewart, Traffic Manager, on behalf of the staff, at the C.I.E. Club, Earl Place, on October 31. Mr. Kirwan received an antique bureau and Mrs. Kirwan a dinner service and a bone-china tea set. Among those present were:—

Messrs. P. Heneghan, Operating Superintendent; A. M. Plumer, District Engineer, Westland Row; M. V. O'Neill, Works Manager, Inchicore; J. H. Dudley, Deputy Motive Power Engineer; P. A. Malone, District Superintendent, Transport House; J. J. O'Dwyer, Commercial Superintendent; A. H. Massey, District Superintendent, Cork; Mr. Purcell, Road Passenger Section.

Mr. Kirwan received a further presentation, on November 2, when Mr. T. C. Courtney, Chairman, on behalf of the Chief Officers, presented him with a barograph in the board room at Kingsbridge.



Mr. W. T. Langbein

Appointed Assistant Chief Civil Engineer, New Zealand Government Railways

Mr. W. T. Langbein, A.M.I.C.E., M.N.Z.I.E., Chief Inspecting Engineer, New Zealand Government Railways, who, as recorded in our October 12 issue, has been appointed Assistant Chief Civil Engineer, joined the Railways Department in 1917 as a civil engineering cadet at Wellington, and within eight years was promoted to Assistant Engineer in the District Engineer's Office at Auckland. In 1929 he became First Assistant Engineer at Auckland, a position he held until 1935, when he transferred to Wanganui as Assistant District Engineer. Following a year as Resident Engineer at Greymouth, he was appointed District Engineer at Dunedin in 1945, and three years later was attached to the Chief Civil Engineer's office as Inspecting Engineer.

The Southern Region of British Railways has announced the appointment of Mr. T. E. Wallace, Assistant to Hotels Accountant, Watford Headquarters, London Midland Region, as Hotels Accountant, Victoria.

The North Eastern Region of British Railways has announced the appointment of Mr. W. G. Thorpe, District Operating Superintendent, Leeds Central, as District Operating Superintendent, Hull.

Mr. J. H. Oliver, formerly Manager of the Hotels Department of Thos. Cook & Son Ltd., has been assigned to special duties under the Manager for Inclusive Traffic. Mr. Jack Hyde has been appointed Manager of the Hotels Department.

Mr. N. Marshall, Deputy Signalling Assistant, Signal & Telecommunications Engineer's Department, Eastern Region, Kings Cross, has been appointed Signalling Assistant (Electrical) in the same Department.

Mr. A. Van Hassel, a Vice-President & Director of the National Steel Car Corporation Limited, Canada, has been appointed President. Mr. O. H. Anderson, who has been Chief Mechanical Engineer since 1925 and a Vice-President since 1942, has been elected a Director to fill the vacancy on the board, and appointed Managing Director.

Mr. Norman A. Paterson

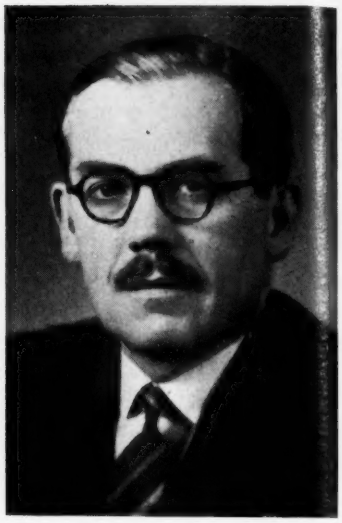
Assistant Chief Accountant, South African Railways, 1946-51

Mr. Norman A. Paterson, M.Inst.T., who, as recorded in our November 2 issue, has retired as Assistant Chief Accountant, South African Railways, joined the Cape Government Railways in 1905 as a ticket checker in the Accounting Department, Cape Town. On the formation of South African Railways in 1910, he was one of a first batch of accounting officers sent to Johannesburg from Cape Town, and subsequently he saw service in many centres and held the office of Local Accountant at all the principal local accounting offices, Cape Town, Durban, Johannesburg and Pretoria. He was appointed Chief Audit Inspector, Johannesburg, in 1939; Revenue Accountant, in 1942; Chief Expenditure Accountant, in 1944; and Assistant Chief Accountant in 1946. Mr. Paterson served on many departmental committees and acted on several occasions as Chief Accountant. He was Honorary Secretary of the South Africa Centre of the Institute of Transport from 1933 to 1936, and was elected as Honorary Treasurer in 1948. He saw service in both world wars. From 1914 to 1917 he served with the 2nd Battalion of the Transvaal Scottish and with the South African Field Artillery. In the second world war Mr. Paterson was a member of the Defence Force Liaison Committee.

Transportation Club Dinner

The monthly dinner of the Transportation Club was held on Tuesday, November 6. In the absence of the Chairman, Mr. G. S. Szlumper, through indisposition, Mr. T. W. Royle presided. There was a large attendance of members. Those present included:—

Messrs. A. Beckett, D. Black, A. J. Boldero V. Bridgen, Lt.-Colonel P. M. Brooke-Hitching, Messrs. B. W. C. Cooke, F. W. Crews, C. R. Dashwood, A. Endicott, K. W. C. Grand, D. H. Handover, Shirley H. James, J. Matthews, Sir James Milne, Messrs. R. J. Morgan, E. J. Morris, Colonel Sir Joseph Nall, Messrs. S. Newman, G. E. Orton, J. C. Patteson, G. Rollason, T. W. Royle, Major-General G. N. Russell, Mr. R. W. Sewill, Sir William Stanier, Messrs. B. Stelp, G. Sutton, Brigadier W. G. Tyrrell, Messrs. A. B. B. Valentine, J. W. Vaughan, C. C. H. Wade, J. C. Way, R. W. Waugh, Alex. J. Webb, W. H. Whelan, E. A. Wildey.



Mr. G. F. George

Appointed Assistant (General), Civil Engineer's Department, Waterloo, Southern Region

Mr. G. F. George, A.C.G.I., A.M.I.C.E., Assistant to District Engineer, Purley, Southern Region, who, as recorded in our October 12 issue, has been appointed Assistant (General), Civil Engineer's Department, Waterloo, received his technical education at the City & Guilds (Engineering) College, London, and spent several years with a contractor on civil engineering work, including bridge reconstruction, before joining the New Works & Bridges Department of the Southern Railway as a draughtsman in March, 1935. Soon afterwards he was engaged on the reconstruction of stations, including Surbiton, Woking, Horsham and Twickenham, on the two latter as Resident Engineer. Holding a commission in the 156 Tn. Stores Coy., R.E., he served in France in 1939 and 1940 and after a period in England, completed his service in North Africa, Sicily and Italy. On his return he was for a short time Resident Engineer at Exmouth Junction Concrete Depot and later on the reconstruction of Bath Road Viaduct, Shepton Mallet. In 1946 he was appointed Personal Assistant to the Chief Civil Engineer, and in 1948 became Assistant to the London East Divisional Engineer. In 1949 he was seconded to the Southern Region Branch Lines Committee as Chief Civil Engineer's representative, and returned to Purley in April of this year.

Mr. Allan Quartermaine

On Friday last, a farewell dinner to Mr. Allan Quartermaine, Chief Engineer of the Great Western Railway and Western Region since 1939, was given at Paddington by past and present officers. Mr. Quartermaine retired from the Western Region on that day and is President of the Institution of Civil Engineers for the current Institution year. Mr. K. W. C. Grand, the Chief Regional Officer, presided at the dinner, and made a presentation to Mr. Quartermaine. Sir James Milne, formerly General Manager, Great Western Railway, and Mr. Cyril Dashwood, Chief Accountant, Western Region, also spoke. Among those present were:—

Messrs. D. Blee, H. G. Bowles, A. E. H. Brown, Dr. H. Cavendish Fuller, Messrs. R. Chitty, H. Adams Clarke, B. W. C. Cooke, F. R. E. Davis, L. E. Ford, C. Furber, M. H. B. Gilmour, G. S. Halliday, F. W. Hawksworth,

S. G. Hearn, R. G. Henbest, F. C. Hockridge, W. P. Keith, G. Matthews, Dr. C. T. Newnham, Messrs. G. E. Orton, F. H. D. Page, W. N. Pellow, H. H. Phillips, R. A. Smeddle, H. H. Swift, S. B. Taylor, H. R. Webb, A. W. Woodbridge, A. Dickson Wright.

Sir Ronald W. Matthews has consented to become President of the Railway Benevolent Institution for the year 1952.

Soviet Railway Technical Institutes

There are 40 technical institutes and 800 technical rooms on the railways of the Soviet Union. They are directed by the instruction department of the Central Technical Institute of Railway Transport in Moscow, which is open to the public and contains numerous models and full-size exhibits. In the locomotive department of the Institute of Moscow is a model of one of the latest locomotives, more powerful by 600-700 h.p. than the Soviet built Class "FD" locomotive, which hauls trains of up to 3,000 tons. There are the parts of a new 2,000 h.p. articulated diesel locomotive of Class "TE-2," which can cover 1,250 miles without taking on fuel or water.

The carriage and wagon section houses 60-ton bogie wagons; a special train made up of hopper, gondola, and tank wagons; and all-metal coaches. There are also examples of Soviet-built automatic brakes and couplings. The track department contains a model of an intricate ballasting machine, electrical instruments used in track laying, a sleeper drilling machine and a rail cutting machine, an electric saw, tamping pick, and a mobile electric station, used for operating the electrical instruments. Exhibits in the traffic department include an operating model of an automatic train stop and a route-control installation, both by Soviet designers.

Training Courses

The management of the permanent demonstration halls and the organisation of mobile technical exhibitions at parks are only two of the Institute's functions. It gives wide publicity to new technique and methods of work, and the introduction of advanced technology, offers systematic guidance, and assists technical centres and laboratories in all railway districts. In co-operation with the Ministry of Railways, one department organises resident, 40-day courses for railway officers and workers. Those attending come from all grades of railwaymen. Lectures are delivered and studies conducted by professors and instructors from railway transport institutes, and leading officials of the Ministry of Railways.

Films have an important place in the educational work of the Institute which has 130 technical films in stock. It also puts out periodical film miscellanies called "On the Steel Highways," in which technical innovations are shown. The production-technical department has ten instruction vehicles available, each equipped with visual aid apparatus for some particular aspect of the railway industry—locomotives, rolling stock, traffic, permanent way signalling, and so on. The vehicles contain actual parts, testing stands, models, and sketches, and are manned by two engineer instructors. Each coach has a film projector. During the first half of this year the mobile instructional coaches visited 60 centres, giving 5,000 studies to some 60,000 railwaymen.

Retired Railway Officers' Society

British railway personalities at jubilee autumn luncheon

The autumn luncheon of the Retired Railway Officers' Society was held at the Criterion Restaurant, Piccadilly Circus, London, W.1, on November 13, under the chairmanship of the President, Mr. A. S. Mills.

Mr. Mills, in proposing the toast of the guests, pointed out that this was the jubilee of the Society, which was formed on November 12, 1901. He expressed the pleasure of members at the presence of Mr. Peter Thorneycroft, President of the Board of Trade, of three former Chairmen of main-line railway companies, Colonel Sir Eric Gore Browne (S.R.), Sir Robert Burrows (L.M.S.R.) and Sir Ronald Matthews (L.N.E.R.), and of the Chairman of the Railway Executive, Mr. John Elliot, and four Chief Regional Officers.

Mr. Peter Thorneycroft, replying, said that at the time he had received his invitation to the luncheon he had been an Opposition back-bencher. He had long been interested in railway questions, and had had transport experience as Parliamentary Secretary to the Ministry of War Transport in 1945, when Lord Leathers (now Secretary of State for Co-ordination of Transport, Fuel & Power) had been Minister. Mr. Thorneycroft pointed out the previous responsibility of the Board of Trade for railway matters, before the formation of the Ministry of Transport in 1919. Transport and trade, he said, played an honourable part in national affairs, and the railways were of vital importance. In transport as in other questions, he continued, recrimination of past errors was of no avail, and he pleaded for a constructive and forward outlook.

Future of Nationalised Transport

Colonel Sir Eric Gore Browne, also replying for the guests, said in so far that nationalisation of transport was irrevocable, it must be accepted. Nevertheless he would like to suggest a commission or similar body composed of those with experience in transport matters to re-examine the organisation of nationalised transport in Britain. Whatever their political views, those who were concerned in nationalised transport must make a success of it.

Sir Robert Burrows proposed the toast of the Society. British Railways, he said, were the fourth Service, because the qualities needed by railwaymen were the same as those needed by the officers and men of the three fighting Services. He remarked on the constant willingness of railway servants to sacrifice their private interests when they had to be transferred on duty from one part of the country to another.

Mr. Ernest Wharton, Past President of the Society, replying, said that the Society was flourishing, with 170 members.

Mr. A. L. Castleman, proposing the health of the President, congratulated Mr. Mills on his distinguished tenure of office.

Those present were:—

Guests

Mr. Peter Thorneycroft; Colonel Sir Eric Gore Browne; Sir Robert Burrows; Sir Ronald Matthews; Messrs. F. A. Pope, Member, British Transport Commission; John Elliot, Chairman, W. P. Allen, and R. A. Riddles, Members, the Railway Executive; C. K. Bird, Chief Regional Officer, Eastern Region; K. W. C. Grand, Chief Regional Officer, Western Region; C. P. Hopkins, Chief Regional Officer, Southern Region; J. W. Watkins, Chief Regional Officer, London Midland Region; Jacques Abady.

Messrs. R. S. Arthurton, R. W. Boorman, R. Burgoyne, A. C. Calladine, J. I. Campbell, A. W. Collcott, B. W. C. Cooke, W. O. Davies, F. G. Dean, E. A. W. Dickson, R. P. Davis.

F. Fencutt, D. Fraser, G. Furber, F. Gilbert, F. Grundy, J. H. Guest, G. J. Harris, H. Haigh, H. E. Hedges, H. Holcroft, E. S. Hunt, J. W. Irwin, C. E. Jordan, O. E. Kinsman, C. F. Klapper, C. Knighton.

D. R. Lamb, W. J. Manclark, R. B. May, W. H. F. Mepsted, W. H. Mills, W. H. Morlock, A. Moss, D. Murray, R. A. Norrish, L. P. Parker, S. E. Parkhouse, C. T. Pelly, W. H. J. Pyne.

D. Ramsay, H. G. W. Read, G. H. Searle, H. E. Stratton, B. D. Sullock, S. Sweeney, F. W. Tipton, W. H. Vine, and A. Wood.

Members

Messrs. A. W. Arthurton, G. S. Begg, A. Bond, H. I. Bond, A. F. Bound, F. S. Bridge, J. Briggs, L. C. Brittlebank, W. P. Bradbury, W. A. Brown, H. J. Burcham.

C. Carslake, S. B. Carter, A. L. Castleman, H. J. Comber, S. O. Cotton, F. E. Cox, O. W. Cromwell, R. G. Davidson, J. W. Easer, R. B. Emerson, W. J. England, E. Falconer, E. P. Fletcher, G. N. Ford.

L. C. Glenister, E. D. Grasett, R. O. Griffiths, A. J. Grinling, H. J. Guest, E. B. Hassall, G. Hickling, C. V. Hill, R. P. Humphreys, C. Johnstone,

J. H. Laundy, J. W. Lovejoy, A. H. McMurdo, S. J. Marchant, E. W. Mauger, J. P. Milton, A. S. Mills, G. Morton, H. V. Mosley, J. Murray, Sir Charles Newton, Messrs. A. W. Norman, P. Nunn.

A. J. Rice, C. I. Routh, H. E. Robarts, V. A. M. Robertson, T. W. Royle, H. J. Rudgard, A. A. Ryan, W. J. Sawkins, F. H, Sedgwick, F. Smith, Sir William Stanier. Messrs. G. Sutcliffe, J. G. Symes, G. S. Szlumper.

W. T. Venton, G. J. Walker, J. R. Ward, E. Wharton, H. E. C. Wheeler, F. C. Wilson, J. H. Woodhead, and J. R. Worrall.

Stabilising Roadbeds in the Netherlands

Settlement of embankments, and ballast sinking into the subsoil, due to increasing loads and speeds and to wave action caused by them have occasioned much trouble on the Netherlands Railways. Many remedies tried have not as a rule proved lasting. The most successful have been the provision of two types of mattress under the track, consisting of (*a*) concrete and (*b*) "slik-slak" slabs. The concrete slabs are cast *in situ* and so can be used only when the track can be taken out of service for some time. They are usually 16-in. thick and have wire-mesh reinforcement top and bottom; the top surface is sloped off for drainage. They may be either of vibrated concrete or of "colcrete."

The advantage of the "slik-slak" method is that no long interruption of traffic is involved. The "slik-slak" is in slabs composed of a powdery substance, the residue from blast furnaces, and, though it never becomes as hard as concrete, it hardens slowly. Similar reinforcement is used. By this method the effects of wave action have been reduced by 90 per cent.

Passenger Charges Scheme, 1951

Opposition to B.T.C. proposals: possible effect of wage increases and rearmament programme on rail travel

Mr. S. W. Hill, financial adviser to a number of local authorities and public utility undertakings, the first witness for objectors to the Passenger Charges Scheme, 1951, again gave evidence on November 7, and in referring to the B.T.C. plans for providing for general and replacement reserve, said that there was a very long way to go before the deficit could be turned into even a modest credit.

If it were true, said Mr. Hill, that costs were still rising and would continue to rise, then the chance of getting to that stage was remote to a very great degree. It would seem to be many years before a positive contribution by London to a reserve fund could be anything but a reduction in the deficit of the B.T.C. To ask London passengers to pay an extra contribution towards the deficit over and above £1,000,000 was asking them to pay a very large sum.

He questioned whether it was correct to provide out of current income—especially having regard to the financial position—against contingency for renewal at higher costs. What it really meant in effect was that passengers at the present time were being asked to suffer an increase in charges greater than would otherwise be the case so that the B.T.C. might be in a position to renew the assets without raising as new capital the full cost of the new assets.

Capital Stock Redemption

Mr. Hill went on to say that the B.T.C. was required by the statutory provision under which it operated to provide for the redemption of its capital stock over a period of 90 years—the same period as that prescribed for electricity and gas—and it seemed to him that excess caution had led the B.T.C. to adopt a policy in the nature of a duplicate provision. Having provided for depreciation fully on all its rolling stock, there was no need to provide either directly for obsolescence on that rolling stock or for something *in lieu* of obsolescence.

When assessing what was a proper amount for London to contribute towards central charges, it should be borne in mind that until 1950 London had more than paid its way, and that there was a limit to what the public could afford. Over and above paying its way, a contribution of £1,000,000 a year was not unreasonable. He considered the estimate for lost traffic as a result of the proposed scheme had not been put high enough and that the loss of traffic would be much greater than estimated so long as there were slender margins of personal purchasing power.

Sir Malcolm Trustram Eve, K.C., for the B.T.C., questioned Mr. Hill on the calculations he had made in relation to the B.T.C. accounts and on his observations on its method of accounting. He asked Mr. Hill why he could not agree with the figures for vehicle movement expenses, and said that if the figure was 100 taken for 1939, a steam train passenger-mile on London lines now cost 261 and an electric train passenger-mile 213.

Mr. Hill said he could not agree with the method of taking the 1939 average of costs and making allowances so to arrive at the figure for today.

Sir Trustram Eve remarked that even if the costs were taken as suggested, the costs in relation to steam trains were almost the same, and electric trains rather higher.

When the hearing was resumed on November 9, Mr. Hill prophesied that the working expenses of the B.T.C. would probably reach a peak next year and then decrease. The reason he thought there should be an improvement was that there had been several wage increases in the last six months, which were bound to have some effect, and it might be that the increasing activity under the rearmament programme and the like would give rise to some travel. The fact that the population was increasing slightly and that people were being decanted to places requiring more travel into London would result in some small improvement if fares remained the same.

Mr. Harold Willis, on behalf of the Kent County Council, submitted that an important point was the point of law which arose out of the way in which the scheme had been put forward. The scheme published by the direction of the Tribunal was a different one from the scheme which the Tribunal was being asked to approve. The question of wage awards had been mentioned, and they might find towards the end of the inquiry that additional proposals were being put forward because the awards were in excess of the figure originally contemplated.

He submitted that the basic approach to the scheme was not the right one. There had been too little regard for the present economic conditions in framing it and too little regard had been paid to the losses of traffic likely to result from the imposition of the scheme.

Dealing with the proposed increases of fares outside London, Mr. Willis said it was wrong that, apart from some minor controls over the maximum charge for the single fare, they should in effect have no control at all. The B.T.C. said that was the present position, and it might well be so, but the question of whether it was right gave rise to an entirely different consideration. He submitted that the figures showed the B.T.C. was seeking more than the traffic could reasonably bear. At the present time, the monthly return ticket was a non-statutory charge under the control of anybody, but that did not necessarily mean it ought to remain so under the new conditions which applied.

Monthly Return Tickets

Provided one accepted that the Tribunal was to have an effective control over what was charged, the monthly return was essentially a ticket which ought to be within the control of the Tribunal. The monthly return represented just under half the total income of the B.T.C. The monthly return was not a privilege; it was a facility. The former Southern Railway took a great deal of trouble to foster its season ticket business and one of the ways in which it did so was by offering special season tickets. On the strength of that people had settled further from London than they would otherwise have done.

Mr. Manon Knowles, Chairman of the Brighton & Hove District Season Ticket Holders, said that many people who used to have first class tickets were already taking third class ones, and accommodation on the business trains was already overcrowded. Some ticket holders were now considering the possibility of hiring coaches to make the journey to London, and to wait for them to take them back at night.

Appeal for special consideration for disabled ex-service persons was made when the inquiry was resumed on Tuesday. In a statement submitted by the Metropolitan Area Council of the British Legion it was suggested that free season tickets between residence and place of work should be issued to all war disabled pensioners in receipt of a pension based on a disability of 40 per cent. or more—with provisions for the granting of such free tickets in cases assessed below 40 per cent. where circumstances justified it.

It was also suggested that anyone registered under the Disabled Persons (Employment) Act, 1944, or anyone on the Ministry of Pensions roll not covered by that Act, should be entitled on production of an appropriate card to travel on any B.T.C. vehicles for any purpose at a reduced rate of 50 per cent.

Sir Shirley Worthington-Evans, for the Corporation of London, said that the B.T.C. was selling a primary product, and every penny that went on the cost of that product, whether at the correct time or an incorrect time, tended to raise costs everywhere including their own costs. He asked the Tribunal to limit any increases of charges to such an extent that working costs alone were met at this stage. Any contributions which they felt they must make to general reserve or any specific reserve or to central charges should be left until times were better.

Commercial Travellers' Concessions

Mr. W. J. Lovell, Parliamentary Agent of the National Council of Commercial Travellers, and General Secretary of the United Commercial Travellers Association, said it was his opinion that the proposed withdrawal of concessionary fares to commercial travellers, together with an increase of fares, would certainly influence a traveller to buy a car. During the 1914-1918 war, when concessions were withdrawn for a time, thousands of commercial travellers went on to the roads, and when the concessions were restored in 1925 they were not taken up to the same extent as before. If the B.T.C. had made it worth while for commercial travellers to use the railways they would be using them much more than they were today.

The inquiry was adjourned until November 14.

INTERNATIONAL CONFERENCE OF MANUFACTURERS.—A team of 30 British industrialists, formed by the Federation of British Industries and the British Employers' Confederation, will attend the first International Conference of Manufacturers in New York from December 2-5. The team will be led jointly by Sir Cuthbert Clegg, President, B.E.C., and Sir William Rootes, acting as personal deputy for the President of the Federation of British Industries. The conference is being organised by E.C.A. in collaboration with the National Association of Manufacturers of America and the National Management Council of America. Other European industrial organisations participating in the Council of European Industrial Federations are sending delegations. The purpose of the conference is to enable leading industrialists of the U.S.A., Britain, and Western Europe to secure better understanding of current problems.

International Union of Railways

Board of Management and General Assembly meetings in Paris

The 32nd meeting of the Board of Management of the International Union of Railways (U.I.C.) was held at Paris at the beginning of November and was followed by the ninth meeting of the General Assembly of the Union.

This was the first meeting of the Board to be presided over by Monsieur Armand, Director-General of the French National Railways, as successor to Monsieur Lemaire, who was at this meeting made Honorary President. Tributes were also paid to Sir Eustace Missenden, and to Monsieur Lucchini, until recently President of the Swiss Federal Railways, who were made Honorary Vice-Presidents.

Subjects Discussed

The primary duty of the annual meeting, which is purely a business function, is to review the work of the five permanent committees and of any special committees, but perhaps the most outstanding features of the recent meeting, which was held at the Union headquarters, were the exceptional number of General Managers of European Railways who attended, and the wide range of subjects discussed, with particular emphasis on the outlook of the railway as an industry *vis-à-vis* other industries, against the general outline of European policy, economic, social, industrial, and political.

The British delegation was led by Mr. John Elliot, Chairman of the Railway Executive, and Vice-President of the Union, who was accompanied by Messrs. R. H. Hacker, Chairman of the First Committee (Passenger Traffic); F. W. Case, Audit Assistant to the Accountant, Southern Region; W. B. Addinall, Secretary of the Continental Traffic Committee; and C. E. R. Sherrington, Chairman of the Special Committee (Exchange of Documentation).

French Railways delegates, in addition to M. Armand, included Messrs. Boyaux, Dargeou, Marois, and Parmantier, Chairman of the Fifth Committee (Technical).

The leading representatives from other countries were M. Delory, General Manager, Belgian National Railways, and a Vice-President of the Union; M. Seidler, General Manager, Austrian Federal Railways; M. Gschwindt, President of the Swiss Federal Railways; Signor G. di Raimondo, General Manager, Italian State Railways, and a Vice-President of the Union; Senor Garcia-Lomas, General Manager, Spanish National Railways; E. Upmark, General Manager, Swedish State Railways; E. Terkelsen, General Manager, Danish State Railways; Dr. Helberg, President of the German Federal Railway; and D. J. Wansink, General Manager, Netherlands Railways.

Other delegates attending from European railways included Signor Palmieri, Italian State Railways, Chairman of the Fourth Committee (Operating); M. Dirlewanger, Swiss Federal Railways, Chairman of the Second Committee (Freight Traffic); M. Iljadica, Jugoslav State Railways; Senor Reparaz, Secretary, Spanish National Railways; Signor Laloni and Signor Cuttica, Italian State Railways; M. Desorgher, Belgian National Railways, Chairman of the Third Committee (Finance, Accounts, & Statistics); and M. Weber, Luxembourg Railways.

One of the main functions of the annual board meeting is to review the work of the several committees and to approve the programmes for their future work, but the current year has been an exceptional one in the history of the Union, since it has witnessed the integration of the various non-Governmental international railway bodies under the general aegis of the International Railway Union.

Further, the Union, to meet the desirability of maximum co-operation between the European railways, has inaugurated within the last twelve months an Office for Research & Experiment (O.R.E.) for which technical and scientific work the Netherlands Railways are the Chairman administration.

In a totally different field comes the Information Centre (C.I.C.E.) covering publicity, tourist travel, and so on, for which the Italian State Railways provide the Chairmanship, while another development in 1951 has been the inauguration of the Documentation Bureau (B.D.C.) at Paris, for which the French National Railways accept responsibility.

It falls to the Board of Management to review the working of such new organisations, which provide strong evidence of the whole-hearted co-operation now existing between the various European railways, and it must not be forgotten that the Brussels Central Clearing House (B.C.C.) remains one of the very important functions of the Union.

The Board of Management meeting, as stated already, was followed by the ninth meeting of the General Assembly. In addition to the delegates to the board meeting, already mentioned, there were present at the General Assembly representatives of the railways of Algeria, Finland, Greece, Indo-China, Iran, Japan, Morocco, Norway, Portugal, Sarre, Syria, and Tunisia; thus the railway systems of no less than 25 countries were represented.

The Director General of the Wagon-Lits Company also attended, as did the President and the Secretary of the International Union of Railway Medical Officers (U.I.M.C.), an organisation now affiliated with the International Union of Railways.

At the close of the meeting, delegates had an opportunity of examining the prototypes of the new standard wagons for European railways, and of visiting the test station of the French National Railways located at Vitry.

Institution of Railway Signal Engineers

Modern signalling methods on the French National Railways

At a meeting of the Institution of Railway Signal Engineers in London on October 3, a paper on "Modern Signalling on the French National Railways" was read by Monsieur J. G. Walter, Chief Signal Engineer, S.N.C.F. The paper was illustrated by lantern slides, and by a film, with English commentary, depicting the operation of a marshalling yard equipped with rail-brakes and the Lévi ball-type automatic point control apparatus, which was described in our issue of February 2, 1934. The President, Mr. S. Williams, was in the chair.

Presentation

At the invitation of the council, Mr. R. C. S. Walters, President, Mr. W. Hawthorne, Past-President, and Mr. W. R. Howard, Hon. Secretary, of the English Section of the Société des Ingénieurs Civils de France, attended for the purpose of presenting to Monsieur Walter the Du Plat-Taylor bronze medal for a paper read before the Section on October 25, 1950, on marshalling yard operation in France.

Mr. R. C. S. Walters said that the object of the medal was to make some recompense to Monsieur Walter for the time and trouble spent in showing them what had been done in such an interesting branch of engineering in France. Monsieur Walter was responsible for numerous modern installations on main-line routes.

Monsieur Walter, after expressing his thanks, then presented his paper, which dealt with double and single-line block, the development of mechanical signalboxes, with the application of director and trajector levers, and route cylinders; the evolution of power signalboxes, from the beginning of the route-lever "combiners" to the present all-relay installations, the most important stages in the process being mentioned in detail; and the principles applying to the new standard designs in all these branches of signalling. The film gave a representation of all the movements taking place in the process of marshalling trains with the aid of the Lévi apparatus, the working of which aroused considerable interest, since only a few of those present had seen this system of automatic point setting.

Discussion

The discussion was opened by Mr. A. Moss, Past-President, who said that the French had the reputation of being a logical people, and it was interesting to see how, with their considerable experience, beginning with miniature levers, in electrical and electro-mechanical installations, they had standardised on a form of route relay interlocking panel with switch control. He thought that more progress had been made in France in the matter of standardisation than in Britain. The application of director levers was interesting, but, though it might save levers, the same amount of outside wire connections appeared to be called for.

The so-called "combiners" used with the early forms of power signalling were peculiar to the French lines and he knew of no similar device here; the nearest approach to the principle was the sequence switch idea. The development by which, after using a mixed arrangement of combiner having mechanical locking and all-relay locking for some controls, they had progressed down to push-button apparatus, as at Montereau, was most interesting. In this country, too, we had "non-stick" working for through movements, when traffic called for it, but the way of bringing it into action was not quite the same.

It appeared that a large use was now being made of the telephone type of relay, and no doubt the arrangements described

resulted in a reduction of cost in the large installations, which presented a serious problem in this class of work.

Mr. H. H. Dyer said that there seemed to be a great many systems and he would be glad to know if it had been decided which was the best. There were many things in the French installations which we could provide if we considered them justified. In the modern all-relay jobs, they seemed to have gone all out to provide pre-setting and other refinements, with consequent complication. For small installations he thought that switches on the panel were satisfactory, but for large ones, a separate console was better. Sometimes, conditions allowed of a large panel being clearly divided, so that switches could be reached satisfactorily, as at Stratford.

He was interested in the question of concrete sleepers, as he had heard that a length of line laid with them, and having rubber pads between the fastenings and the rails and below the rails, had been working for over a year. Could this equipment be trusted for a term of years?

Method of Working

Mr. E. G. Brentnall said that the "free possession" method of working the single-line block appeared to mean that a train could be dispatched without the other station knowing it was approaching. Suppose it did not wish it to do so? The director and trajector levers were ingenious and had particular value in France in consequence of the use of only one stop signal where routes diverged. All types of power interlocking, from individual levers to route-relay systems, had been used, and the last named selected as being the best.

The President, moving a vote of thanks to Monsieur Walter for his paper, said that the signal engineer in France seemed to have much the same worries as his counterpart in this country, but he had a somewhat freer hand and apparently more money to spend.

Visit to Toton Up Yard

On Monday, November 12, a party of press representatives inspected the mechanised Up marshalling yard at Toton, London Midland Region. The main party travelled from London, and after lunch Mr. J. W. Watkins, Chief Regional Officer, London Midland Region, and Mr. L. M. Sayers, District Operating Superintendent, Nottingham, London Midland Region, gave an introductory address.

Mr. Watkins extended a welcome from Mr. John Elliot, Chairman of the Railway Executive, and said that though Toton could not claim to be the only mechanised marshalling yard, it did combine a variety of improvements. Before mechanisation, hand-braking of wagons had been used; now, new methods had not only brought about comparative ease in sorting, but also a saving in manpower, which was estimated at 25 per cent. Toton was an indication of what British Railways were trying to do to improve the transit of coal. There had been a 23 per cent. increase in the ton miles of coal hauled since 1938 and the length of haul was up by 25 per cent. Politics were not the concern of British Railways, which would continue to do their job regardless of political change. Many improvements had been made, and Toton, on which £800,000 had been spent to expedite traffic, was a notable example.

Mr. Sayers, who welcomed the party on behalf of local railwaymen, explained the purpose and operation of Toton yard. There were many interesting features at Toton and in designing this fine yard, much ingenuity had been used to produce speed and safety in handling the traffic.

After a thorough inspection of the yard, which is the subject of the first of a series of articles elsewhere in this issue, the party returned to London. Among those present were:—

London Midland Region: Messrs. D. H. Binyon, Mechanical & Electrical Engineer's Department; W. Bridges, Area Assistant to Signal & Telecommunications Engineer; H. Capstick, Assistant Divisional Operating Superintendent; W. B. Carter, District Commercial Superintendent, Nottingham/Derby; George Dow, Public Relations & Publicity Officer; W. D. Lander, Yardmaster, Toton; R. C. Pickerell, Marshalling Yard Assistant, Operating Superintendent's Department (also representing Mr. S. G. Hearn, Operating Superintendent); J. R. Sampson, Assistant District Operating Superintendent, Nottingham; L. M. Sayers, District Operating Superintendent, Nottingham; D. D. Scott, District Motive Power Superintendent, Toton; J. Taylor Thompson, Civil Engineer; J. W. Tonge, Assistant Public Relations & Publicity Officer; S. Williams, Signal & Telecommunications Engineer.

Also among those present were: Mr. K. S. Dobson, *The Railway Gazette*; Mr. Fricker, Market Director, National Coal Board; Messrs. Noel Gee, Chief Press Officer, National Coal Board; D. R. Lamb, Editor, *Modern Transport*; D. Murray, Executive Officer (Mineral Traffic), Railway Executive; J. Murray, formerly Assistant Chief General Superintendent, L.M.S.R.

Standard Warehouses for Traders

Precast concrete design evolved by British Railways for erection by six men in 120 working hours

It has long been the practice for the railways to provide self-contained buildings in goods yards and at outlying stations to be rented by private traders. Hitherto, each main-line railway had its own standard types, but now the Railway Executive has produced a standard store for all Regions, the prototype of which has been erected at Waterloo.

To overcome the serious shortage of building materials, the structural design is entirely of precast concrete, and embodies a unit platform and floor, with posts and rafters cast as one unit to give clear-cut internal lines, wall panels, purlins, and roof units. Alternatively the roof cladding may be of asbestos sheeting, as shown in the prototype illustrated.

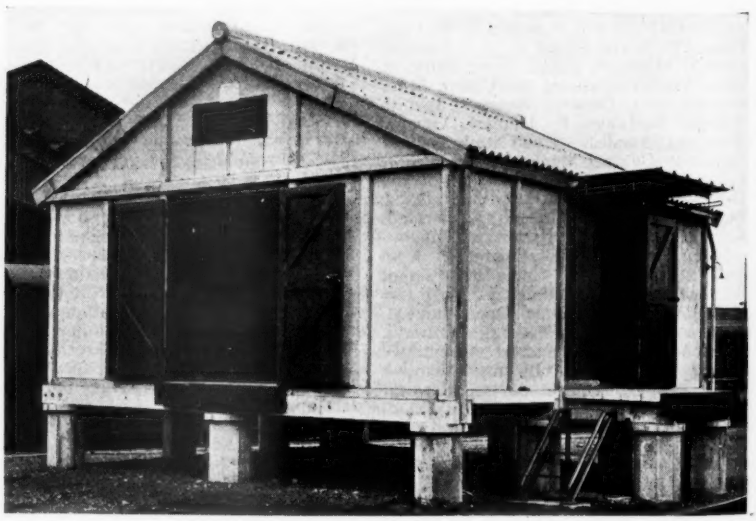
The store is available in two widths, 20 ft. and 13 ft. 6 in., the minimum length being 20 ft., but this may be extended in units of 6 ft. 6 in. A compound store may be formed of any combinations of the two widths, and doors and windows can be arranged in any panel. The basic store is supplied with the walls lined with timber battens, and Perspex sheeting roof-lights are fitted. Duck boards covering about 70 per cent. of the floor area may be added. The store, though well ventilated by means of fluted together floor slabs and gable louvres, is vermin proof.

Production is at present undertaken by the Southern Region at Exmouth Junction. Stores are being produced at the rate of one every fortnight, involving an expenditure of 400 manhours on casting, and 307 manhours on prefabricating the reinforcement. A curing period of two weeks is allowed for every pre-cast unit and the present rate of production is determined by the available mould capacity.

Timber Fittings

Timber fittings are prefabricated at the same depot, and steel articles are made at other Southern Region depots. Roof covering and other standard articles are supplied by the stores department, and all components required for a complete store are assembled at the concrete works and loaded in wagons in the correct sequence for erection.

The store has been designed with a view to easy erection by a gang of six men in about 120 working hours for a 20 ft. by



Prototype of prefabricated concrete warehouse produced at Exmouth Junction

20 ft. type store, with no other equipment than small timber crutches for the main units, the heaviest being about 5 cwt., and light trestles for putting on the roof. After the floor has been put in the superstructure is off-loaded direct on to this. Quality of the concrete is carefully controlled and regular cube tests are taken.

Staff & Labour Matters

Railway Wage Award

The Railway Staff National Tribunal award in connection with the claim of the three railway trade unions lodged on July 30 for a 10 per cent. increase in pay, and with the separate claim from the A.S.L.E.F. for enhanced payment for weekend working provides that as from September 3, 1951, the existing rates of railway salaried and conciliation staff covered by the negotiating machinery for railway staff be increased by 8 per cent.

The increased rates are to be taken into consideration in calculating overtime, Sunday duty, and night duty payments, but do not involve adjustments in tonnage or other bonus payments.

For weekend working, the Tribunal awards that as from the first pay day after November 7, 1951, the following additional flat rate payments be made to conciliation staff and salaried staff covered by negotiating machinery in respect of full turns of duty which begin on Saturday afternoons:

When the booking-on time is 2-6 p.m., the flat-rate payment is 4s. where the rate of pay does not exceed 130s. a week and 5s. where the rate exceeds 130s. When the booking-on is 6-8 p.m. the flat-rate payment is 2s. where the rate of pay does not exceed 130s. a week and 2s. 6d. where the rate exceeds 130s.

The booking-on time relates to the commencing time of the shift for the day, and not, for example, to the time of beginning the afternoon part of a shift after a meal interval.

The Tribunal award as regards weekend working is in line with the offer made by the Railway Executive on August 28.

Effects of Award

The increased annual cost to the British Transport Commission of implementing the award is some £14½ million, against £9¼ million for the Executive offer and £17-18 million for the unions' claim.

The minimum rate on the railways is raised by 8s. 2d. a week, from 102s. 6d. to 110s. 8d., compared with 107s. under the Railway Executive offer.

Examples of increases are as follow:—

Grade	Present Rate	New Rate
	p.a.	p.a.
Clerk Cl. 5, aged 26 ...	£310	£334 16s.
Inspector Cl. 2 (max.) ...	£475	£513
	p.w.	p.w.
Shunter	112s.	121s.
Signalman Cl. 3 ...	118s.	127s. 5d.
Checker	111s.	119s. 11d.
Fireman (max.) ...	126s.	136s. 1d.
Ganger	118s.	127s. 5d.

The three railway trade unions have all intimated their acceptance of the Railway Staff National Tribunal award.

At the time of going to press, the results were awaited of a meeting held on November 14 between representatives of the Railway Executive and the railway unions to discuss the award.

Dock Workers' Claim

Delegates from four unions representing approximately 100,000 dock workers decided at a meeting in London on November 9 to lodge a claim for a substantial increase in pay and a second week's holiday with pay. The four unions concerned are the Transport & General Workers, the Scottish Transport & General Workers, the National Union of General & Municipal Workers, and the National Amalgamated Stevedores & Dockers Union.

The wage claim includes a demand for revision of the existing minimum guaranteed wage of £4 8s. for a full week's attendance, and also for an increase in the present basic wage of £1 1s. a day.

Parliamentary Notes

Transport Problems

Mr. J. A. Sparks (Acton—Lab.) on November 7 in the Commons debate on the address in reply to the King's speech, said he was not sure that the Government was proposing to deal with transport in a way which would restore its efficiency and give it its due influence in the economic life of the country. The railwaymen were watching the Government to see exactly what it proposed to do. So far they were not satisfied that the Government proposals would achieve greater efficiency in transport. They must first understand, when they talked about internal transport, that they referred to the railways and to road haulage.

It was the policy of the Government and of the Conservative party to divorce road haulage from the railway transport system. He warned the Government that if it pursued such a policy it would bring the transport system of this country to chaos, because the competitive basis of road and rail was very different. Mr. Sparks then developed his point by illustrations of the capital cost of railway fixed installations. Although road vehicles, he added, contributed to the Road Fund, the roads in Britain were subsidised very heavily from local rates, and it was those roadways which the road haulage system was using.

Therefore to try to divorce the road haulage from the railway system was bound to be disastrous. There was only one solution to that transport problem, and that was co-ordination.

Mr. Sparks denied that nationalisation had failed. It had saved the railways from an even worse financial predicament, just as between the wars the State had had to subsidise the railways on one occasion —when private enterprise was supposed to be at its best.

Plea for Railwaymen

Miss Irene Ward (Tynemouth—C.) said that though much had been done for the miners, railwaymen, with their magnificent record during the war, had a legitimate grievance. They were the Cinderellas of the industrial community. She deprecated the passing on of increased costs to railway users by rises in railway charges. They must, however, be fair to railwaymen. An efficient railway system was essential to Britain. It might be that the railways could not carry the burden of expenditure. She asked whether the Chancellor of the Exchequer would take a broad view of the community's responsibility to the railways, and she hoped that railway operation would not be regarded within the narrow terms imposed by the Transport Act.

Railwaymen much disliked nationalisation; many of her railwaymen constituents, continued Miss Ward, had voted for her at the last election, when her Labour opponent in an election address had pointed out that under nationalisation it was not possible to offer railwaymen a proper standard of life.

Mr. John Taylor (West Lothian—Lab.) said that the recent railway wages award of the Railway Staff National Tribunal was one of the advantages railwaymen had gained under the Labour administration.

Contracts & Tenders

Tomlinson Steel Limited, a Western Australian company engaged in the manufacture of heavy industrial equipment, is planning a new factory at Welshpool, Western Australia, for the fabrication of steel and the assembly of railway wagons from component parts. A large number of British-built components is expected to arrive early in 1952. The company has made arrangements with the Metropolitan-Cammell Carriage & Wagon Co. Ltd., for the manufacture and assembly of all classes of rolling stock. Immediately after the war Tomlinson Steel Limited undertook the manufacture of a large number of railway wagons for the Indian Government.

The Sudan Railways have placed an order for 100 Isothermos axleboxes with Robt. Hyde & Son Ltd., through that company's London Office, G. Stephenson & Co. Ltd.

The Indian Government has placed the following further contracts under its 1952-53 programme:—

Baume & Marpent, S.A., Marpent, Nord, France: 100 broad-gauge hopper-wagons; 50 broad-gauge four-wheel underframes.

Cowans Sheldon & Co. Ltd., Carlisle: Five 75-ton travelling cranes; five 40-ton breakdown cranes; four 35-ton breakdown cranes.

N.V. Machinefabriek du Croo & Brauns, Amsterdam, Holland: 16 10-ton travelling cranes.

Grafton Cranes Limited, Bedford: 17 5-ton travelling cranes.

Klockner-Werke, A.G., Osnabruck, Germany: Nine 2-ton coaling cranes.

North British Locomotive Co. Ltd., Glasgow: Seven "XD" locomotive boilers.

Ste. Anglo-Franco-Belge, La Croyere, Belgium: Ten "CWD" locomotive boilers; eight "MAWD" locomotive boilers.

Swiss Locomotive & Machine Works, Winterthur, Switzerland: Three broad-gauge underframes for tower wagons.

Thos. Smith & Sons (Rodley) Ltd., Leeds: 24 10-ton travelling cranes.

Thos. Turton & Sons Ltd., Sheffield: 5,000 helical springs.

The American Car & Foundry Company has recently received an order from the Barrett Division of the Allied Chemical & Dye Corporation for 100 all-welded tank cars of 12,500 gal. capacity. These 70-ton cars, which are to be used in general service, will be built at the American Car & Foundry Milton, Pennsylvania Works.

The Board of Trade Special Register Information Service states that the British Consul General at Lourenco Marques has reported a call for tenders by the Directorate of Ports, Railways & Transport, for the construction of the railway from Guija to the site of the proposed Sirdar dam—a distance of 23 km. The announcement of this call for tenders appeared in the Official Bulletin of Mozambique published on November 3, from which date the period of 90 days for presentation of tenders com-

menced. Tenders should be addressed to the Directorate of Ports, Railways & Transport of the Province of Mozambique, at Lourenco Marques.

A copy of the tender documents, which is in Portuguese, is available for inspection by the representatives of United Kingdom manufacturers at the Board of Trade, Commercial Relations & Exports Department, until November 23. After this date it will be available on loan to manufacturers in order of written application; reference C.R.E. (IB) 74557/51 should be quoted.

A further report from the Board of Trade Special Register Information Service states that the closing date of the call for tenders (No. 2227) issued by the Government of New South Wales for suburban electric motor and trailer coaches has been extended from 12 noon, Wednesday, December 19, to 12 noon, Wednesday, February 6, 1952. The tender was previously referred to in our August 10 issue.

The Rio Grande do Sul Railway, Brazil, is calling for tenders for the supply and installation of all the equipment necessary for the electrification of the line from Santa Maria to Cruz Alta (88¼ miles, metric gauge), according to a recent report by the Board of Trade Special Register Information Service. This includes high-voltage transmission lines, sub-stations, track supply equipment and locomotives. Power will be taken at 6,600 V., 50 cycles, from an existing generating station 2¼ miles from Santa Maria. The electrification system proposed is 3,000 V. d.c., but alternatives may be put forward. Consideration should be given to using existing stocks of 20 kg. per m. rails for the erection of overhead line supports. Separate quotations may be made for signalling equipment required for electrified sidings at several stations. The contracting company will be required to supply skilled labour until the line is working. The closing date for receipt of tenders is January 22, 1952, and tenders should be addressed to the Engineering Department, Viacao Ferrea do Rio Grande do Sul, Porto Alegre. Plans and details are available on loan to manufacturers in order of written application from the Board of Trade, Commercial Relations & Exports Department, Millbank, London, S.W.1, quoting the reference C.R.E. (IB) 74138/51.

SOUTHERN REGION STAFF CONFERENCES.—During this winter, Mr. C. P. Hopkins, Chief Regional Officer, Southern Region, British Railways, will hold a series of informal staff conferences on similar lines to those held for the past four years. The first will be held at Brunswick House, Nine Elms, on November 23, and others will take place at Folkestone on January 22, Brighton on March 5, and Salisbury on April 3, 1952.

RAILWAY BENEVOLENT INSTITUTION.—The usual New Year's Day collection in aid of the Railway Benevolent Institution will be made on Tuesday, January 1, 1952, at all railway stations in Great Britain and Ireland. The number of employees who became members of this year's casualty fund was 183,830, and assistance has been given to 66 widows of men killed, 487 widows of men dying from illness, and 3,002 men accidentally injured, making a total of 3,555 cases relieved, or one in every 52 contributors.

Notes and News

Vacancies for Designers in Prestressed Concrete.—Applications are invited for posts of expert designers in prestressed concrete required by British Railways, Western Region. See Official Notices on page 559.

Annual Dinner of Transportation Units Supplementary Reserve.—The annual dinner of the Transportation Units Supplementary Reserve will be held on February 1 next at the Criterion Restaurant, Piccadilly, London, W.1.

Vacancies with London Transport.—Applications are invited by London Transport for temporary technical posts in the Signal Office, Earls Court. Applicants should be between 21 and 25 years of age. See Official Notices on page 559.

Southern Railway Dramatic Society.—The Southern Railway Dramatic Society is presenting the play "A Murder has been Arranged," by Emlyn Williams, at the Scala Theatre, Charlotte Street, London, W.1, on December 19 at 6.45 p.m.

Tyne Improvement Commission.—Applications are invited for the appointment of an assistant civil engineer in connection with the design, maintenance and construction of dock and harbour works, required by the Tyne Improvement Commission. See Official Notices on page 559.

Development of Fife and Clackmannan Coalfields.—The Scottish Region of British Railways announces that in connection with the expansion of the Fife and Clackmannan coalfields certain new works schemes at Oakley and Kelty have been completed and other projects are in progress. At Oakley, between Stirling and Dunfermline, over 40,000 cu. yd. of material have been excavated and tipped to form embankment for new reception and departure lines; a new bridge has been constructed across the public road to allow extension of shunting facilities; and work has started on the construction of a modern signalbox and coaling and ash-handling plant. New works at Kelty, on the Edinburgh-Cowdenbeath-Perth main line, include the extension of 12 sidings and the provision of a new signalbox. Over 90,000 cu. yd. of material have been tipped and 5,700 lineal yards of permanent way laid.

October Steel Production.—British steel production in October was at an annual rate of 15,629,000 tons, as compared with 15,749,000 tons in the previous month, and 17,040,000 tons in October, 1950. Pig iron production was at an annual rate of 9,865,000 tons last month, against 9,854,000 tons in September, and 10,084,000 tons in October last year.

Railway Supplementary Reservists Called Up.—Employees of British Railways or London Transport railways recently called up as Supplementary Reservists include personnel of the following Royal Engineer units: H.Q. 18 and 19 Railway Groups, 150 and 151 Railway Maintenance, 152 and 153 Railway Traffic, 154 Locomotive Running, 155 Railway Workshop, 157 Locomotive Running, and 159 Railway Survey Squadrons.

Railway Students' Association.—Mr. George Dodson-Wells, Chief Public Relations Officer, London Transport Executive, read a paper "Public Relations—Mainspring of Industry," at a meeting of the Railway Students' Association, London School of Economics & Political Science, on November 14. The chair was taken by Mr. C. K. Bird, Chief Regional Officer, Eastern Region, British Railways, and President of the Association for the 1951-1952 session.

Closing of Sandling-Hythe Branch.—The branch from Sandling Junction to Hythe (Kent) will be closed to all traffic from December 3. Sandling Junction Station will be renamed Sandling for Hythe. A bus service connects the town of Hythe with Folkestone Central Station. The double-track branch from Sandling Junction *via* Hythe to Sandgate

North Eastern Region Window Display

Window display in the British Railways information bureau at Scarborough (*see paragraph in our November 9 issue*)

OFFICIAL NOTICES

DRAUGHTSMAN with experience in the preparation of general engineering drawings, for reproduction in technical journals, required by London publishing house. Good lettering essential. Salary according to experience. Write stating age and experience, and sending specimens.—Box 281, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

LONDON TRANSPORT invite applications for temporary technical posts in Signal Office, Earls Court. Applicants (aged 21-25 years) should possess Higher National Certificate in electrical engineering or equivalent. Selected applicants given 3 months' course followed by examination; successful candidates will be engaged on preparation of plans, wiring diagrams and drawings for power signalling installations. Salary £231-£391, according to qualifications. Appointments subject to medical exam. Applications within 14 days to STAFF OFFICER (F/EV194), LONDON TRANSPORT, 55, Broadway, S.W.1. For acknowledgment enclose addressed envelope.

JUNIOR TRAFFIC OFFICIALS with railway traffic apprenticeship experience. Age about 25, single, required for service on railways in Peru and Bolivia. Apply to the Secretary of the PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

FOR SALE: Kendall & Gent Plano-miller. Capacity 12 ft. × 6 ft. × 6 ft., drive by 25-h.p. motor through gearbox, voltage 400/3/50. Can be seen working. Cheap for quick sales.—Box 255, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

HIS MAJESTY'S COLONIAL SERVICE

APPLICATIONS are invited for the following posts:—Assistant Engineers (Capital Works) 27333/6, Nigerian Railways. Appointment will be for a tour of 18-24 months on contract/gratuity terms, which may be renewable, in the salary scale of £830-£1,450. Point of entry being determined by approved professional experience and War service. A temporary cost-of-living allowance of from £63-£110 per annum is at present payable. An outfit allowance of £60 is payable on first appointment. Free passages are provided for an officer and his wife; and a grant of up to £150 per annum is payable for children's passages or education. Furnished quarters, where available, are provided at a rent varying from £75 to £150 according to salary. Leave on full pay is granted at the rate of one week per month of resident service. Candidates should have passed or hold exemption from Sections "A" and "B" of the A.M.I.C.E. examinations; and should have some years experience of railway civil engineering, particularly bridge work. Intending candidates should apply in writing to the DIRECTOR OF RECRUITMENT (COLONIAL SERVICE), COLONIAL OFFICE, Sanctuary Buildings, Great Smith Street, S.W.1, giving brief details of their age, qualifications and experience. They should mention this paper and quote the reference number (27333/6).

JUST PUBLISHED.—Twenty-Five Years of the North Eastern Railway, 1898-1922. By R. Bell, C.B.E., Assistant General Manager, N.E.R. and L.N.E.R. Companies, 1922-1943. Full cloth. Cr. 8vo. 87 pages. 10s. 6d.—*The Railway Gazette*, 33, Tothill Street, London, S.W.1.

TYNE IMPROVEMENT COMMISSION

APPOINTMENT OF AN ASSISTANT CIVIL ENGINEER.—Applications are invited for the appointment of an Assistant Civil Engineer in connection with the design, maintenance and construction of dock and harbour works. Applicants must be qualified persons having experience in the design and construction under contract and by direct labour of structural steelwork, jetties, quays, railway layouts, buildings and other works appertaining to port installations. Applicants will be required to pass a medical examination and to become members of the Commissioners' Superannuation Fund. Commencing salary according to qualifications and experience will be on the scale £535 rising to £700 per annum (plus War Bonus at present £65 per annum). Applications stating age, education and training, professional qualifications, experience in the preparation of plans, contract particulars, and construction of civil engineering works, and giving the names of two referees, should be addressed to the undersigned so as to be received not later than December 14, 1951. J. K. MCKENDRICK, Secretary, Tyne Improvement Commission, Bewick Street, Newcastle-upon-Tyne, 1.

SENIOR DRAUGHTSMAN required with full knowledge of Railway Permanent Way Layouts, etc., by Engineering Firm in the Midlands. Providing applicant enjoys good health, a young man is not essential, and a retired British Railways Draughtsman would be considered. If required, a suitable house would be available. State age, experience, and salary required.—Box 267, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

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was opened in October, 1874. The 1½ mile section from Hythe to Sandgate was closed in 1931 and subsequently dismantled, and the Sandling-Hythe section converted to single track at that time. The Sunday passenger train service was withdrawn as a war measure in 1917, and never restored, and during the second world war all passenger services were suspended from May, 1943, until October, 1945, when they were resumed on a very limited scale.

Accident on Union Pacific Railroad.—Twenty-six persons were reported killed and 200 injured on November 12 when two streamline expresses, "City of Los Angeles" and "City of San Francisco," both bound for Chicago, collided in a blizzard near Evanston, Wyoming, on the Union Pacific Railroad.

Institute of Transport, Metropolitan Section.—The Annual General Meeting of the Institute of Transport, Metropolitan Section, will be held at 80, Portland Place, W.1, at 5.30 for 6 p.m. on December 3, and will be followed by a paper entitled "Independent Hauliers and the Transport Act, 1947," by Mr. W. Fraser.

British Railways to Test Chrome Steel Rails.—British Railways are to carry out tests with rails made of chrome steel to see if they wear better than those made of ordinary steel. The tests will be made in short lengths on straight and curved lines so as to cover both top and side wear. The chrome rail will be of the 109-lb. new standard flat-bottom type.

Strengthening of Ordie Viaduct, Scottish Region.—Engineering work of some importance has begun at Ordie Viaduct, Perthshire, Scottish Region, where strengthening and repair work is being carried out. The viaduct, which was built over 100 years ago, carries the main lines from Perth to Stanley and the north over the valley of the Ordie. The 300-ft. long viaduct carries a heavy volume of traffic by day and night, and to carry out the work, which is being done in stages, the Civil Engineer's Department has complete possession of one longitudinal half of the double-track viaduct. To permit maximum movement of rail services with the minimum of restriction the lines over the entire length of the viaduct have been interlaced. On completion of the first stage of the work the interlacing of the up and down lines will be changed over. The work will take some months to complete.

British Railways Coal and Steel Carryings.—The biggest weekend clearance of coal for eight months was made by British Railways last weekend when 423,380 tons were carried from deep-mined pits and opencast sites, making a total of 3,202,810 tons for the week. The latest figures for iron and steel show that 204,558 tons were conveyed during the week ended November 3 from the principal steelworks.

Simplon Tunnel Blocked.—The Swiss Federal Railways announce that a landslip near Varzo, on the Italian side of the Simplon Tunnel, between Iselle and Domodossola, has completely covered the two tracks and the road for a distance of 500 yd. and buried four persons. It was hoped to improvise a service by the end of this week, but normal traffic cannot be resumed for several weeks. Meanwhile, international trains are being diverted via the St. Gotthard.

Great Western Railway (London) Dramatic Society.—The selection of "This Happy Breed," by Noel Coward, as its Festival year play, is evidence of the confidence placed in the members of the Great Western Railway (London) Dramatic Society by the producer, Mr. Arthur E. Clapp. The play was presented at the Park Theatre, Hanwell, London, W.7, on Wednesday and Thursday this week, and there will be a further presentation tomorrow (Saturday) at the Fortune Theatre, Russell Street, London, W.C.2, at 7.20 p.m.

More Diesel Shunting on British Railways.—It is stated that a programme has been submitted by the Railway Executive to the British Transport Commission for approval for provision of several hundred small diesel-electric shunting locomotives. The latest British Railways statistics, for the four-week period ended September 9, show the total number of diesel-electric locomotives as 132, of which five (three designed and built under L.M.S.R. and later L.M.R., and two under Southern Railway and later Southern Region auspices) are for main-line working.

Andean Railway Connections.—On page 317 of our September 21 issue, reference was made to three railways across the Andes between Argentina and Chile. It should have been made clear that the southernmost line, between Bahia Blanca and Concepcion, is only projected.

United States Railway Strike Threat.—President Truman has created an emergency Board to deal with a threatened strike of about 75,000 locomotive men affecting four major railways. Under the law the President's action bars a strike for at least 68 days.

Institute of Transport Anniversary Luncheon.—The anniversary luncheon of the Institute of Transport was held at the Connaught Rooms, Great Queen Street, W.C.2, on November 14. The principal speakers were Earl Mountbatten of Burma and Lord Brabazon of Tara.

Leopoldina Railway Takeover Approved.—It is reported that President Vargas of Brazil has finally approved the takeover of the Leopoldina Railway as the result of findings presented to him by the Administrative Department of Public Services. The purchase price contracted in London in 1949, equivalent to approximately 819,000,000 cruzeiros, may possibly be reduced by 11,048,000 cruzeiros, representing the value of stores.

Thomas De La Rue & Co. Ltd.—Mr. B. C. Westall, Chairman & Joint Managing Director, at the recent annual general meeting of Thomas De La Rue & Co. Ltd., said that the net profit for the year, before taxation, showed an increase from £503,953 to £623,103. This was entirely brought about by an improvement in trading results. The provision for taxation absorbed £420,157 and was a considerable increase on last year. Profits carried forward amounted to £349,950 as compared with £307,570. Sales in the plastics division were double those of the previous

year and in particular there had been a big expansion in the exports of laminated plastics. A new company in which they held a 55 per cent. interest had been formed in France for the manufacture of laminated plastics and arrangements for the manufacture of these materials had also been concluded with an Italian firm.

Dorman Minature Circuit Breaker.—Three demonstrations of the Dorman Minature circuit breaker will be given at St. Ermin's Hotel, Westminster, S.W.1, on November 26 and 27, when the technical aspects and applications of this product will be dealt with. The demonstrations will be held at 3 p.m. on November 26 and at 11 a.m. and 3 p.m. on November 27. Seating accommodation is limited, and therefore those wishing to attend should apply to the London office of the firm, Dorman & Smith Limited, 10, Emerald Street, W.C.1.

Forthcoming Meetings

November 16 (*Fri.*).—Institute of Transport, Tees-side Section, at the Cleveland Scientific & Technical Institution, Middlesbrough, at 7 p.m. "Road Haulage as a National Service," by Major-General G. N. Russell.

November 17 (*Sat.*).—Railway Students' Association, visit to Fullers Earth Union Limited, Copyhold Works & Quarries, Redhill, Surrey. Party will be assembled at 9 a.m. in Redhill Station Booking Hall.

November 19 (*Mon.*).—Institute of Transport, at the Jarvis Hall (R.I.B.A.), 66 Portland Place, London, W.1, at 5.45 p.m. "Marine Transport of Oil in Bulk," by Mr. W. G. Weston, General Manager, Marine Department, Anglo-Saxon Petroleum Co. Ltd.

November 20 (*Tue.*).—Institute of Transport, Metropolitan Graduate & Student Society, at 80 Portland Place, at 5.45 for 6.15 p.m. Annual General Meeting.

November 21 (*Wed.*).—Institution of Railway Signal Engineers at the Dining Club, Hunts Bank, Manchester, at 6.30 p.m. "Rectifiers in Railway Signalling Circuits," by Mr. L. E. Thompson.

November 21 (*Wed.*).—Permanent Way Institution, London Section, at Railway Executive Headquarters, 222, Marylebone Road, N.W.1, at 6.30 p.m. Discussion: "Flat Bottom v. Bull Head Track," initiated by Messrs. L. J. Bennett and L. F. Duddridge.

November 21 (*Wed.*).—South Wales & Monmouthshire Railways & Docks Lecture & Debating Society, at the Angel Hotel, Westgate Street, Cardiff, at 6.30 p.m. "Gas Turbines," by Mr. A. W. J. Dymond, Assistant to Mechanical & Electrical Engineer, Western Region.

November 21 (*Wed.*).—Institution of Locomotive Engineers, at the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 5.30 p.m. "Diesel Rail Traction," by Mr. R. W. Stuart Mitchell, Chief Development Engineer, Diesel Engine Division, English Electric Co. Ltd.

November 21 (*Wed.*).—Royal Society of Arts, John Adam Street, Adelphi, London, W.C.2, at 2.30 p.m. "The Reclamation of Abandoned Industrial Areas," by Mr. L. Dudley Stamp.

Railway Stock Market

Stock markets have been cautious mainly because the dominating factor has been the decline in British Funds affected by talk of a further increase in the Bank rate in the near future. Industrial shares, though subject to only moderate selling, failed to attract buyers because of a general disposition to await details of the E.P.T. plan. This new tax will bear sharply on increased profits, but will not prevent higher dividends from companies which have a favourable E.P.T. standard, or which in recent years have dealt conservatively with their profits and paid dividends well below the rate of earnings on their share capital. Nevertheless it is generally felt that until the E.P.T. plan is announced the investment outlook is difficult to assess.

Partly because of the waiting attitude as far as home securities are concerned, overseas stocks have tended to attract attention, and there has been more business passing in foreign rails. Leopoldina stocks became more active on the news that the President of Brazil has approved the take-over deal. The 6½ per cent. debentures moved up to 146 and the 4 per cent. debentures to 98½. On the other hand, the ordinary and preference stocks were less firm at 10¾ and 27 respectively, on fears that an additional payment in respect of the value of stores, etc., may not be made, in which case hopes of small extra distributions or the ordinary and preference stocks would not be forthcoming. Leopoldina Terminal 5 per cent. debentures moved up to 98; the ordinary units were 1s. 7½d. United of Havana stocks revived on reports from Cuba that the National Sugar Mill Owners' Association plans to form a company to acquire the railway. The 1906 debentures rallied to 19¾, the 4 per cent. debentures were 7¾, and the 4½ per cent. Cuban debentures 45. Holders of United of Havana stocks have had so many hopes and fears regarding take-over developments that they probably view the latest news without much enthusiasm. But they can be assured that the directors will make every effort to secure fair and reasonable terms for stockholders if a take-over compensation offer is made. If stockholders were asked to exchange their securities for stocks in a Cuban-registered and controlled company it is probable that few would wish to do so unless the exchange were on attractive terms.

After reacting on sales on behalf of a deceased estate Manila Rail stocks rallied, the "A" debentures to 76, and the 5 per cent. preference to 8s. 9d. Antofagasta ordinary and preference have been firmer at 17¾ and 76½. Elsewhere Bolivar "C" debentures were 48 and La Guaira ordinary stock 95. San Paulo 10s. units have been more active around 15s. 4½d. Nitrate Rails shares were 25s. 6d. and Taltal 20s. 6d. Mexican Central eased to 89 and National of Mexico 4½ per cent. non-assented to $46. Canadian Pacifics, at $68¼, regained part of an earlier fall. The 4 per cent. preference and 4 per cent debentures were 71¾ and 87. After the commencement of dealings White Pass Yukon 4½ per cent. first debentures eased to 31½ and the 5 per cent. convertible debentures to 33¾.

Road transport shares were more active and sentiment was helped by the new plans in regard to road haulage. Southdown were 93s. 9d., West Riding 46s. 6d., and Lancashire Transport 55s. Devon General marked 112s. 9d., Aldershot & District 80s. 9d., and Ribble Motor 79s. 6d. B.E.T. deferred stock was £475.

Small indefinite movements prevailed among engineering and kindred shares partly because of the view that Labour opposition tactics in Parliament may mean that steel denationalisation will not take place until 1953. Vickers receded to 48s. 7½d., Guest Keen were 55s. 4½d., and T. W. Ward 80s. 6d. B.S.A. were firm at 42s 3d

Locomotive building and allied shares have remained firmly held. Hurst Nelson were 62s. 6d., Birmingham Carriage 38s. 6d., Vulcan Foundry 26s. 6d., North British Locomotive 19s., and Gloucester Wagon 15s. 3d. Beyer Peacock were 32s. 9d. and Charles Roberts eased to 26s. 6d. Wagon Repairs 5s. shares receded to 13s. The market thinks that, though there are good prospects of dividends of locomotive builders and engineers being maintained, E.P.T. will leave little scope for higher payments.

PUBLIC TRANSPORT ASSOCIATION INCORPORATED.—The 1952 Conference of the Public Transport Association Incorporated will be held at Torquay on April 29 and 30 and May 1 and not as previously announced.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1949/50	No. of week	Aggregate traffics to date: Total 1950/51	Aggregate traffics to date: Increase or decrease
				£	£		£	£
South & Cen. America	Antofagasta ...	811	2.11.51	149,420	+ 83,430	44	5,332,530	+ 2,430,076
	Costa Rica ...	281	Sep., 1951	c1,134,577	+ c208,010	13	c3,703,247	+ c357,376
	Dorada	70	Aug., 1951	36,976	— 5,426	35	288,447	— 24,505
	Inter. Ctl. Amer....	794	Sep., 1951	$923,671	— $76,767	39	$9,945,698	— $281,585
	Paraguay Cent. ...	274	2.11.51	£375,691	+ £193,677	18	£6,007,111	+ £2,542,389
	Peru Corp. ...	1,050	Oct., 1951	$8,381,000	+ $622,000	18	$32,898,000	+ $1,692,000
	,, (Bolivian Section)	66	Oct., 1951	Bs.18,324,000	+Bs.5,859,000	18	Bs.59,719,000	+Bs.16,745,000
	Salvador	100	July, 1951	c125,000	+ c20,000	4	c125,000	+ c20,000
	Taltal	147	Oct., 1951	$1,639,000	+ $317,000	18	$7,943,000	+ $2,142,700
Canada	Canadian National†	23,473	Sep., 1951	17,646,000	+ 279,000	39	153,415,000	+ 21,228,000
	Canadian Pacific† ...	17,037	Sep., 1951	11,990,000	— 247,000	39	105,001,000	+ 14,030,000
Various	Barsi Light* ...	167	Aug., 1951	22,500	— 1,785	21	191,250	+ 31,920
	Egyptian Delta ...	607	10.4.51	17,513	— 267	4	17,513	— 267
	Gold Coast ...	536	Aug., 1951	220,509	+ 16,972	21	1,280,126	+ 109,832
	Mid. of W.Australia	277	July, 1951	46,474	+ 2,594	4	46,474	+ 2,594
	South Africa ...	13,398	13.10.51	1,894,367	+ 185,148	28	52,940,179	+ 6,419,844
	Victoria	4,744	July, 1951	1,732,775	+ 23,478	4	—	—

* Receipts are calculated at 1s. 6d. to the rupee † Calculated at $3 to £1